Profiling the Plight of Disconnected Youth in America[a]

by

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1. Introduction

Despite the billions of federal, state, local and private dollars spent on a wide range of programs aimed at helping disadvantaged youth, many still experience "disconnection" leading them to fail in acquiring the skills necessary for establishment as independent adults. In a successful transition from youth to adulthood, individuals pass through a sequence of roles involving school, work, and family formation that culminate in their becoming self-sufficient adults. Successful paths comprise numerous orderings and timings of these roles. Many youth undergo a misstep or failure in one or more of these areas (dropping out of school, entry into foster care, involvement with the justice system, unwed parenthood, lack of steady employment) without being seriously detoured from the path to independent adulthood. However, some youth spend extended periods of time outside of any role that constitutes an element of the pathway towards adult independence. These are America's disconnected youth.

The costs of serious missteps in the transition to adulthood can lead to formidable costs both in personal and social terms. For young women, such missteps include never finishing high school, giving birth outside of marriage and becoming dependent on welfare. Male youth who are out of school and not at work for long periods are more likely to engage in delinquent behavior and to engage in illegal activities to earn a living. When the transition to adulthood is eventually made, those who experienced these problems often continue to pay long-term penalties in the form of lower earnings and fewer weeks employed. Social costs include higher crime rates, more young children n poverty, and lower economic productivity. Costs to government include higher transfer payments and social support expenses, as well as lost tax revenues.

A major challenge encountered in implementing any policy intended to assist disconnected youth involves acquiring a systematic understanding of which youths lose their way in the transition to self-sufficient adulthood, along with the full range and combination of roles through which individuals can become connected (or reconnected). By developing profiles depicting the timing and duration of disconnectedness, and the personal and family background characteristics associated with it, policy makers can direct and shape interventions in ways that will maximize their effectiveness. Interventions can be targeted to groups most at risk of experiencing difficulties in the transition process before they become disconnected (e.g., unwed teen mothers or poor unemployed young men); and for those who may currently be underserved by existing programs, services can be reoriented to access individuals at the mix of ages and roles when they are most approachable for reestablishing "connectedness".

This study develops a powerful empirical approach for profiling the plight of disconnected youth. Rather than identifying these youth by a summary of their experiences at a particular age – such as the accumulated number of disconnected months reached by this age – our approach introduces the concept of spells of disconnection. The analysis detects: (i) the likelihood that a youth with particular characteristics enters a first disconnection spell at various ages, (ii) the length of time a youth spends in this spell if it occurs, (iii) the tendency of a youth to exit a disconnection spell and reconnect, and (iv) the likelihood that a youth disconnects again and enters a renewed disconnection spell. This empirical framework not only portrays a

comprehensive picture of experiences, it further offers a natural setting for identifying when disconnection episodes occur and who makes up the persistent group. Moreover, the empirical findings provide a concrete basis for addressing the following five questions:

- What is a useful way to define the term "disconnected"?
- How pervasive is the problem of disconnection?
- Can one identify sub-groups of the population that are more likely to become disconnected?
- How much has the incidence of disconnection changed over the past two decades and can we identify the proximate reasons behind this shift?
- What federal, state, and local government funding serve disconnected youth, and where are the points of entry for these services in youths' profiles of experiences?

In answering these questions, our analysis entertains several popular notions of disconnection, which involve circumstances wherein a youth experiences some combination of not working, not in school, and not living with a spouse. Our empirical analysis exploits rich longitudinal data drawn from the National Longitudinal Surveys of Youth for 1997 (NLSY97) and for 1979 (NLSY79), with NLSY97 providing the main source for depicting the experiences of today's youth and NLSY79 offering comparisons for how experiences have changed over time. These data permit monthly tracking of activities characterizing disconnection along with linkages to a wealth of other information describing the situation of youth.

Our empirical framework provides a valuable setting for interpreting much of the literature on disconnected youth. Existing work on this issue tends to depict the point-in-time circumstances of a cross-section of youth, an important exercise designed to gain perspective on the scope of the problem at hand. Wertheimer, Croan, and Jager (2002) estimate the size of several groups of youth in the 14-24 age range – such as those not enrolled in school and without a diploma, welfare recipients, or children of incarcerated parents – that may be especially vulnerable to difficult transitions to adulthood. Similarly, Wald and Martinez (2003) use cross-sectional data to identify and estimate the size of several groups that are at-risk for disconnection, and also examine the demographic characteristics of these groups. In Wald, et al. (2003), we find a detailed chronicling of the labor force attachment, government program participation, and social engagement of youth in their mid-twenties. In order to interpret the results of these studies, one needs to develop a precise notion of "disconnection", which allows for an understanding of which members of these vulnerable groups policymakers should be most concerned about. Moreover, an examination of the disconnection trajectory of youth as they move into early adulthood casts light on the dynamic processes that underlie the point-in-time characterizations in these studies. This paper attempts to achieve both these goals.

While longitudinal research on disconnected youth is rare, a study by Brown (1996) is a notable exception, using the same NLSY79 data that we incorporate into the analysis below. We utilize our statistical framework in order to provide a more structured understanding of the patterns revealed by Brown, and their relationship to a strictly defined notion of disconnection. Moreover, we apply consistent modeling techniques to the NLSY79 and NLSY97, allowing an analysis of how disconnection has changed over time. The previous studies suggest that the size of the current disconnection problem is significant, and some note the problem may stay stable or

grow over time. Our historical comparisons, however, provide more hope. As we will see, there has been a steep decline in disconnection since the early 1980s.

Our purpose here is not to estimate a formal model of the decision-making of youth regarding enrollment and employment. The literature on the fundamental economic decisions behind disconnection – school enrollment and labor force attachment – is vast. On the enrollment side, the education literature on the issue of dropping out of high school is much larger than the economics literature. It often examines useful explanations that are not purely economic, focusing on considerations such as youth attitudes and school quality. In the economics literature, work such as that of Heckman and Cameron (1999) and Eckstein and Wolpin (1999) attempts to understand schooling transition decisions. Card and Lemieux (2000) take a longer-run perspective in order to understand the economic forces behind trends in U.S. school enrollment rates over the last fifty years. Turning to the related work on youth labor force attachment, studies such as Wolpin (1987) and Eckstein and Wolpin (1995) estimate detailed economic models of the transition from school to work. While our subject matter is clearly related to these studies, our aims differ. We focus on describing the phenomenon of disconnection, including its variation by age for a given youth, its variation across several key demographic groups, and its variation over time. In doing so, we not only examine youths' employment and enrollment histories, but also delve into marital histories and touch upon criminal experience, program participation, and more. We believe such an analysis can provide insight into the consequences of the decision processes modeled in studies like those above. Furthermore, the analysis can provide clues as to the most fruitful areas of economic research for policy-makers and researchers who are interested in attacking the problem of disconnection.

The remainder of this paper consists of five sections. Section 2 describes the size and composition of the disconnected youth population in America in the late 1990s and early 2000s. The analysis considers several notions of disconnection, and it develops a flexible multi-spell duration model to identify and characterize youth's experiences. Section 3 assesses the extent to which some youth undergo long-term disconnection, along with the characteristics of these youth and their tendency to incur multiple spells of disconnection. Section 4 documents how much – and the ways in which – youth's disconnection experiences have changed over the past two decades, and Section 5 explores several factors explaining the lowered incidence of disconnection observed in the 1990s. Finally, Section 6 summarizes the central findings of this study and further outlines the challenges faced by policy makers in designing services targeted either to prevent youth from entering disconnected states or to reconnect them to paths to becoming independent adults.

2. Identifying Youth Who Become Disconnected

The creation of profiles characterizing the routes by which youth first become disconnected not only requires a clear definition of what one means by disconnection, but also an empirical framework capable of producing an extensive picture of the experiences of youth who reach disconnected statuses at various points of their lives. Moreover, to assist policy makers in their deliberations over services targeted either to prevent youth from entering disconnected states or to reconnect them to paths to becoming independent adults, the empirical analysis must assess the degree to which youths sharing similar histories avoid undergoing such disadvantaged circumstances.

This section presents the first steps of our approach for accomplishing these goals. It opens with a discussion of the measure of disconnection used throughout our empirical analysis, along with the longitudinal data utilized to develop profiles. It then introduces a notion of an episode of disconnection, and formulates a statistical duration model for characterizing the likelihood of entering such episodes at different ages for persons of different characteristics. Finally, the discussion summarizes our empirical findings describing initial episodes of disconnections, and it identifies those groups of youth more inclined to become disconnected.

2.1 Concept of Disconnection and Description of Data

The first challenge any empirical researcher encounters in studying disconnection involves specifying a clear definition of "disconnection". In a loose sense, one can think of disconnection as being a status when youth are not employed and not involved in educational activities for extended periods. However, this notion ignores the role of marriage in the transition process. Married women, particularly women with young children, may choose to withdraw from the labor force for some time and depend on the support of a spouse for financial support. Failure to account for this choice would result in the mis-specification of homemakers as disconnected youth. One may further wish to interpret cohabitation on par with marriage, in which case one would not classify youth as being disconnected when they either live with a spouse or with a comparable adult who financially supports the family. Moreover, policy makers may wish to distinguish the circumstances of youth living with parents (or a spouse) from those higher-risk youth who experience disconnection from all means of support, including school, work, spouse, and family. To identify the experiences of youth falling into this latter, more grievous notion of disconnection, one would develop profiles narrowing the examination of youth to those not working, not in school, and not living with spouses/relatives.

The following discussion principally focuses on two concepts of disconnection: (1) months when a youth is not working and not in school; and (2) months when a youth is not working, not in school, and not living with a spouse. The analysis briefly describes how profiles would change if one were to narrow definition (2) to exclude from the disconnection pool those youth cohabiting with a partner comparable to a spouse.

The National Longitudinal Surveys of Youth for 1997 (NLSY97) offers an unparalleled data source for assessing not only who becomes disconnected youth in today's America, but also for

documenting their experiences prior to and after reaching this state. Beginning in 1997, this survey collects data annually to supply elaborate longitudinal information in a monthly time frame on a sample of respondents who were in the age rage 12-17 at the start of the survey.[1] This survey offers a nationally-representative sample as well as supplementary samples for blacks and Hispanics, with the most recent survey year available for our empirical analysis being 2003. We do not use all of this sample in our empirical analysis, keeping only those individuals with data available in the first quarter of age 16 and dropping any individual who attrits and does not return by wave 7. In calculation of estimates, we use panel weights from the latest round (i.e. 2003). The NLSY97 allows extensive linking of youths' behaviors and experiences both contemporaneously and at various stages of the life cycle. These data not only report detailed information on each youth's work activities and family circumstances, but also ask about a variety of "high risk" behaviors and track persons while in the justice system. The survey supplies ample data on each person's participation in educational activities and a wide array of social, health and training services at different ages – events we integrate into our profiles.

To assess how the picture of disconnection has changed over time, the National Longitudinal Surveys of Youth for 1979 (NLSY79) provides a comparable data source to NLSY97 for profiling the experiences of youth in the early 1980s. The 1979 survey (NLSY79) reports data collected annually from a nationally representative cohort of youths who were in between 13 and 22 years of age at the time of first interview. In estimation results using NLSY79, we exploit the nationally-representative cross-section and the supplementary samples of blacks and Hispanics – we exclude the "poor white" and the military sub-samples of the NLSY79. Further, we keep only those individuals observed during the first quarter when they reach age 16 and drop respondents who attrit and do not return by 1990 (when the youngest cohort will be 25).

In formulating longitudinal histories for each sample respondent in the NLSY, we infer the youth's connection status in each month relying on the definitions described above. We interpret an individual to be working when the person reports working at least one hour in that month, considering both regular employment and self-employment.[2] We define an individual to be not enrolled in school in a month when that month is a part of a contiguous sequence of 4 months of non-enrollment. We impose this 4-month continuum to avoid counting short absences from school (e.g., summer break) as dropping out. Finally, in NLSY97, we define living with spouse using the NLSY cohabitation event history variables; and in NLSY79, we define living with spouse to mean married and not separated. Appendix A present details concerning the structure of these variables and selection of samples and variables taken from the NLSY97 and NLSY79.

2.2 Assessing Disconnection Based on Accumulated Experience

We begin by presenting a simple analysis of the incidence of disconnection. Table 2.1 presents the shares of youth experiencing various amounts of disconnection by ages 20 and 22. The

[1] The survey also collects retrospective data, which allows us to create event histories starting in 1994, when individuals were between 9 and 14. Unfortunately, the earliest information offered in NLSY79 is from 1978.

[2] Data on "freelance" work are not available for individuals under age 18 at the time of each survey, but freelance is included in self-employment for those older than 18. The NLSY defines freelance work as self-employment for which an individual earns less than $200 per month (e.g., babysitting).

findings report the percentages of individuals who experience *x* cumulative months of disconnection between age 13 and age *y*.[3] The first two columns of the table report results using a definition of disconnection in which youths are not working, not enrolled and not living with a spouse; the second two columns consider youths to be disconnected if they are not working and not enrolled. For example, the first cell in the table indicates that by age 20, 12 percent of the population experienced at least 12 months in which they were not employed, not enrolled, and not living with a spouse.

The table offers a useful way to summarize the magnitude of the issue of disconnection. Overall, nearly a quarter of all youths growing up in the United States in the late 1990s accumulate at least a year of not working and not being enrolled by age 22, while 11 percent accumulate two years according to this definition. The table also provides a crude measure of which groups are likely to be most at risk for disconnection. For examples, blacks, both male and female, are substantially more likely to experience disconnection and to accumulate many months of disconnection. The table also shows that the risk-groups that we have identified (teen mothers, high-school dropouts, youths who have been convicted of a time, and youths who have spent time not living with parents) experience much higher rates of disconnection.[4] The proportion of individuals disconnected according to the spouse definition is slightly lower. This suggests some individuals who would be otherwise disconnected marry and receive support from their spouses.

2.3 Statistical Framework Specifying Episodes of Disconnections

While the summaries of accumulated experiences reported in Table 2.1 present a general picture of the incidence of disconnection, one can develop a richer characterization of disconnected youth by introducing a notion of disconnected episode. To begin the analysis, we require a precise definition of what constitutes disconnection and when disconnection begins and ends. We define an individual to be disconnected in a given month if that individual is both disconnected in that month and will be disconnected in at least 8 of the following 11 months.[5] Similarly, we define an individual to be connected in a given month if that individual is both connected in that month and will be connected for at least 3 of the following 11 months. These definitions mean that it is possible for an individual to be neither connected nor disconnected in certain months while the individual transitions from one state to another. However, these definitions do allow us to accurately date the beginning of spells. We use these variables to estimate a duration distribution. The statistical framework is described below, and is utilized not only in this section, but in different contexts throughout the remainder of the paper.

A duration distribution characterizes the likelihood that an individual experiences a given number of quarters of continuous residence in a particular status given admission into this status

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[3] If an individual enters the sample after age 13, then we count disconnection from that age instead.

[4] These four "risk groups" are similar to the risk groups considered by Wald, et al. (2003). In the table, we refer to the fourth group as foster children for simplicity; for a precise definition of how we are using "foster child" here, please see the appendix.

[5] This definition allows for loose connection, while still capturing those youth who are least connected to society.

and some specification of history prior to the start of the spell. Letting "i" designate an arbitrary status, a duration distribution takes the form

$$f_i(\tau) = S_i(\tau - 1)\ P_i(\tau, Z_i)\ , \tag{2.1}$$

with

$$S_i(\tau - 1) = \prod_{t=1}^{\tau - 1} [1 - P_i(t, Z_i)]\ . \tag{2.2}$$

In these expressions, the variable τ corresponds to the duration of a spell spent in economic status *i*, and *Z* accounts for factors other than duration that influence the lengths of these spells. The hazard rate $P_i(t,Z)$ designates the likelihood that an individual leaves the current status in the *t-th* quarter after already having been in the state for *t-1* quarters, with the covariates *Z* summarizing the demographic characteristics and history at the start of the current episode. $P_i(t,Z)$ conditions on the variables *t* and *Z*. The function $f_i(\tau)$ specifies the likelihood that a spell in status *i* will last exactly τ quarters for individuals falling into a category characterized by attributes *Z* at the beginning of the spell. Finally, the quantity $S_i(\tau\text{-}1)$, the survivor function, depicts the probability that an individual will experience an episode in status *i* that lasts at least τ-*1* quarters.

To estimate duration distributions to first occurrences, this analysis proceeds by estimating the probabilities of the specified event occurring in a quarter: $P_i(a,Z)$ for unconditional first occurrences, where *a* represents age in quarters, and *Z* represents other covariates; and $P_i(t,Z|K)$ for first occurrences conditional on another event (e.g., a first spell of disconnection), where *t* represents quarters since the conditioning event occurs. As formulated in relations (2.1) - (2.2), these probabilities correspond to the hazard rates associated with first experiencing event *i* in the current quarter. Multiplying these probabilities together generates the full likelihood for the duration to first occurrence.

The empirical specification requires an appropriate functional form for the probabilities $P_i(a,Z)$ and $P_i(t,Z|K)$ (both referred to as $P_i(t,Z)$ for simplicity). Two aspects of this functional form are critical to these specifications. The first involves the nature of duration dependence applicable for spells to the various events, which primarily determines how *P* varies with *t*. The second concerns the effect on *P* of an individual's characteristics, which are included in the covariates *Z*.

Plotting hazard rates is a popular mode for presenting information about the character of duration dependence. Graphs of these rates in our data reveal that empirical specifications of the probabilities $P_i(t,Z)$ must admit non-monotonic duration dependence. Standard empirical specifications typically do not accommodate non-monotonic duration dependence.

To allow for such flexibility, we specify the following logistic model for the probabilities $P_i(t,Z)$:

$$P_i(t,Z) = \frac{e^{-Z\beta_i - g_i(t,\alpha_i)}}{1+e^{-Z\beta_i - g_i(t,\alpha_i)}}, \quad (2.3)$$

where β_i is a parameter vector, and the function $g_i(t, \alpha_i)$ determines the duration properties associated with the spell to first occurrence of event *i*.

The covariates included in the vector *Z* can be divided into four main categories.[6] First, all specifications include dummy variables indicating whether a youth is African-American or Hispanic. Second, all specifications include a vector of dummy variables indicating the highest level of educational attainment of a youth's parents. These dummy variable specify whether parents graduated from high school, attended college but did not obtain a degree, graduated from college, or earned an advanced degree. Third, some specifications include a variable that indicates whether a youth's parents received aid from government programs at any time during the youth's childhood. Finally, some specifications include variables that indicate whether youths experienced certain important life events before or during the first spell of disconnection. These events include giving birth, dropping out of school, or being convicted of a crime. The impact of these covariates, all else constant, is assumed not to vary with duration.

In specification (2.3), the function $g_i(t, \alpha_i)$ captures the properties of duration dependence. Spline models are an attractive approach for modeling duration effects, since they fit the data with a flexible and smooth function of duration. Implicit in conventional spline models, which fit polynomial functions to a series of intervals over duration, is a tradeoff between smoothness and goodness of fit. Fit can be improved by increasing the number of polynomial functions, but non-differentiability at the boundaries requires a sacrifice in smoothness. Limiting the number of intervals or the order of the polynomial functions yields a smoother curve but diminishes the capabilities of detecting complicated forms of duration dependence.

In our approach, we specify $g_i(t, \alpha_i)$ as the general function:

$$g_i(t,\alpha_i) = \sum_{j=1}^{J} [\Phi_{ij-1}(t) - \Phi_{ij}(t)]\,[\alpha_{ij}] \quad . \quad (2.4)$$

The quantity $\Phi_{ij}(t)$ denotes the cumulative distribution function of a normal random variable possessing mean μ_{ij} and variance σ_{ij}^2, and the α_{ij} in (2.4) represents a parameter vector.

The presence of the *cdf*'s in (2.4) permits us to incorporate spline features in *g* so that the constant α_{ij} represents *g* over only a specified range of *t*. In particular, suppose we wish to set $g_i = \alpha_{i1}$ for values of *t* between 0 and t^* and to set $g = \alpha_{i2}$ for values of *t* between t^* and some upper bound $\bar{t}$. To create a specification of *g* that satisfies the property, assign $J = 2$ in (2.4); fix the three means determining the *cdf*'s as $\mu_{i0} = 0$, $\mu_{i1} = t^*$, $\mu_{i2} = \bar{t}$; and pick very small values for the three standard deviations σ_{i0}, σ_{i1}, and σ_{i2}. These choices for the μ's and the σ's imply that the quantity $\Phi_{i0}(t)-\Phi_{i1}(t)=1$ over the range $(0, t^*)$ and $=0$ elsewhere, and the quantity $\Phi_{i1}(t)-\Phi_{i2}(t)=1$ over the range $(t^*, \bar{t})$ and 0 elsewhere. Accordingly, g_i possesses the desired property. Further,

[6] A brief description of the variables is included here. A fuller description of how these variables were constructed is included in Appendix A.

$g_i(t, \alpha_i)$ is differentiable in t. With the values of the μ_{ij} and the σ_{ij} set in advance of estimation, $g_i(t, \alpha_i)$ is strictly linear in the parameters α. One can control where each spline or polynomial begins and ends by adjusting the values of the μ's. One can also control how quickly each spline cuts in and out by adjusting the values of the σ's, with higher values providing for a more gradual and smoother transition from one polynomial to the next.

2.4 Empirical Findings Describing Initial Episodes of Disconnections

Using the framework described above, we begin by analyzing when youths experience their first episode of disconnection. Figures 2.1 and 2.2 present the rates at which youth first enter a spell of disconnection, with rates plotted as a function of age measured in quarters. These figures graph raw and fitted hazard rates, with Figure 2.1 reporting rates for young men and Figure 2.2 listing rates for young women. The raw hazard rates are calculated at each quarter age as weighted means with the numerator equal to the sum of weights for those individuals who experience an event for the first time in that quarter and the denominator equal to the sum of weights for all individuals who had not experienced the event up to that quarter. The fitted hazards are estimated using a specification of the logit model described in equation 2.3 above, including the covariates: (i) race dummy variables; (ii) a set of dummy variables to indicate the maximum educational attainment of the respondent's parents; (iii) a government aid variable; and (iv) a set of four splines. To specify the spline model in equation (2.4), we set J=4 and select values such that $\Phi_{i0}(t)=1$ and $\Phi_{i4}(t)=0$ for all observed ages. We set μ_{i1}*= 8 (age 15),* μ_{i2} *= 20 (age 18),* and μ_{i3} *= 28 (age 20)*, with the corresponding standard deviations set at 3, 1.5, and 1.5 respectively. We report the weighted mean of the fitted values from the logits, across all individuals in the sample. The hazard rates measures the probability of entering a state conditional on not having entered that state up to a given age. For example, the raw hazard rate suggests that one percent of males will first experience an episode of disconnection at age 17.5 conditional on not having experienced any disconnection prior to that age.

As revealed in Figure 2.1, the raw hazard rates for young men demonstrate a sharp increase in disconnection around age 18. This corresponds to the age at which most teenagers conclude high school. There is substantial noise during the 18-22 age range with hazard rates decreasing slightly from the previous peak. The fitted hazards do a good job of capturing the increase in disconnection at age 18 while smoothing out some of the noise in the raw estimates.[7] The figure also indicates that adding the living with spouse condition decreases disconnection slightly for males starting at around age 18. This indicates that a small number of males who are not working and not enrolled are getting married, and perhaps relying on their wives' income.

For young women, Figure 2.2 exhibits a similar pattern with a large increase around age 18 and then a small decrease and a lot of noise during the college-age years. Females appear to have more substantial spikes around age 22 than do males. This corresponds to the age at which most young people would be completing a four-year college program. Using the spouse condition leads to lower estimates of disconnection starting at a younger age than for males.

[7] We interpret much of the movements in the empirical hazard rates for later ages as noise because our sample sizes are smaller at these ages, due to the design of the survey discussed above.

Figure 2.3 uses the fitted hazard functions from Figures 2.1 and 2.2 to plot the failure functions, which are calculated as

$$F_i(\tau) = 1 - S_i(\tau) . \quad (2.5)$$

These functions depict the probability that an individual will not experience an episode in status *i* that lasts at least τ quarters. Stated more simply, these figures report the probability of experiencing a spell of disconnection by each age. For example, Figure 2.3 indicates that by age 20, approximately 20 percent of males will have experienced an episode of disconnection according to the no work-no school definition.

As we would expect from the hazard rates, this figure demonstrates a substantial increase in disconnection around age 18. Individuals continue to disconnect at a fairly constant rate through age 22. This profile suggests that individuals have trouble establishing long-term attachment to the labor market once they leave school. We expect to observe a leveling off after age 23, which would be consistent with our calculations using the NLSY79 data. Unfortunately, the oldest cohort is 23 in the 2003 data, so we do not have any observations past this age. The figure demonstrates that males and females experience similar profiles of disconnection, with females slightly more likely to disconnect according to the no work/no school definition, but slightly less likely to disconnect once we take marriage into account. As noted above, the spouse definition matters earlier for females, but by age 22 the disconnection probabilities are approximately equal for males and females. In summary, this figure provides an initial graphical depiction of the timing and pervasiveness of disconnection, for both males and females. The probability of experiencing a disconnection spell is affected by the choice of whether to use the spouse condition or not, but regardless of this choice, this probability begins to increase dramatically around the high school completion age. By age 23, many youth have experienced a disconnection spell.

One concern with the approach we take is that we may miss some individuals who accumulate a substantial number of disconnected months without ever experiencing a concentrated spell of disconnection (i.e., a 12 month period in which an individual is disconnected for at least 9 months). To investigate this possibility, we look at the proportion of the sample that experiences zero spells of disconnection according to our 9 of 12 definition, while accumulating at least 12, 18, and 24 total months of disconnection according to our two definitions. Table 2.2 is constructed similarly to Table 2.1, and reports these results for cumulative disconnection by ages 20 and 22. For example, less than 1 percent of individuals accumulate 18 total months of disconnection without experiencing at least one spell of concentrated disconnection. Of individuals who experience at least 12 months of disconnection, around 10 percent "achieve" this without experiencing any spells of concentrated disconnection. These results suggest that our duration analysis looking at first and second spells of disconnection picks up 85-90 percent of those individuals who disconnect for a substantial period of time.

To assess whether the individuals that we miss are particularly interesting to the analysis, we compared characteristics of their disconnection history with those of individuals who are identified as having one or more spells of disconnection. Again, a spell of disconnection consists

of a series of 12 months in which the individual is disconnected for 9 months. Table 2.3 presents the key results from this exercise, looking at the degree of concentration of disconnected months in youths' disconnection histories. The first three columns of the table examine youth who have accumulated 12 months of disconnection by age 22, but have no spells of disconnection.[8] Each of the columns provides results for a different disconnection of definition, with "N" referring to the "no work-no school" definition and so on, "S" referring to the "no work-no school-no spouse" definition, and "C" referring to the "no work-no school-no spouse/partner" definition.[9] There, we see that regardless of the definition, the average gap between these youths' first quarter with a disconnected month and most recent quarter is about 13 quarters (or 52 months). The next panel shows that on average, these youth have accumulated about 14 months of disconnection by age 22, with only 5% having more than 20 months under the "N" definition. Finally, in the bottom panel, it is apparent that many of these youth have a sequence of 6-8 months of disconnection at some point before 22. This portrays a clear picture of the youth we are missing with our definition of "disconnection spell". These youth tend to have a burst of disconnected months over a 6-8 month period, and then have several more disconnected months scattered over a very long period. Very few have more than 20 disconnected months in all.

We note the distinction between this type of disconnection history and that characterized in the rightmost three columns of Table 2.3. These columns refer to the experience of youth who accumulate at least 12 months of disconnection by age 22, but have one or more spells of disconnection by that time. These youth have approximately the same gap between their first and last quarters of disconnection as the group of youth we miss with our definition of "spell". But by any of the "N", "S", or "C" definitions, they have significantly more total disconnected months than the previous group, with an average of around 25-27 months. Twenty percent have more than 35-38 months of disconnection, depending on the definition used. From the bottom panel's listing of the 50th percentile, we see that half of these youth have experienced a year and a half of consecutive months of disconnection.

Therefore, the youth with at least one spell seem to have more months of disconnection concentrated within a given time period, with some of these disconnection episodes especially long. These are exactly the type of youth that we are most interested in, and the comparison with the first three columns of Table 2.3 suggests that our definition of "spell" does not cause us to miss youth with very intense disconnection experiences. This is crucial, because we rely on this notion of "spell" for the rest of our analysis. We conclude that the duration analysis using our definition of disconnection spell provides a clean and relatively complete methodology for studying the issue of disconnection in the United States.

2.5 Role of Cohabitation in Concept of Disconnection

As noted in the introduction, one may wish to consider cohabitation with a partner to be equivalent to cohabitation with a spouse. To assess the impact of cohabitation, we repeat the

[8] There are only a small number of youth with 18 or more accumulated months of disconnection and no spells, so we focus only on the 12 month case.

[9] We will consistently use "N", "S" and "C" in this way through the remainder of the paper.

above analysis but add a third definition in which an individual is disconnected if she is not working, not enrolled and not living with a spouse or partner.

Figures 2.4 and 2.5 plot the failure functions for our three definitions of disconnection for males and females, respectively. They are analogous to Figure 2.3 above. For males, the results using the cohabitation definition are not substantially different than those with the spouse definition. However, for females, it makes a more substantial difference. In other words, if we treat females as connected if they live with either a spouse or partner, they are substantially less likely to disconnect relative to the spouse definition. This suggests that some females, who are otherwise disconnected, receive support from partners with whom they live.

2.6 Identifying Those Groups More Inclined to Become Disconnected

Our analysis allows us to make systematic statements about the composition of the disconnected population. Tables 2.4 and 2.5 present the coefficient estimates from the logit model underlying the predicted hazard rates (i.e., the β_i in equation 2.3). For each definition, we report two sets of coefficient estimates, one without the government aid variable included and one with. We include the first specification for later comparison with our NLSY79 results, but discuss the second specification here.[10] Positive values on the coefficient estimates indicate that a characteristic is associated with an increased likelihood of disconnection relative to the omitted variable. For example, black males are significantly more likely than white males to experience an episode of disconnection. It should be noted that the omitted racial group is always the group of non-black and non-Hispanic youth. This group is predominantly white, and so we may refer to the group as white for simplicity; however, this point should be kept in mind.

The estimates indicate that, in addition to black males experiencing more disconnection, the education of one's parents makes a significant difference, with the signs on all of the dummy variables negative and significant. This indicates that the more educated an individual's parents, the less likely that individual is to disconnect. The parent education variables likely proxy for living conditions in early childhood (e.g., wealth, quality of school, social network, etc.). The results for females are similar to those for males except that the Hispanic variable is now significant as well in three of the four specifications presented, suggesting that Hispanic females are significantly more likely to disconnect than white females. The magnitude of the black variable is lower but still significant. In addition, the coefficients on college graduate and advanced degree are larger in absolute terms. This suggests that highly educated parents of females are correlated with lower rates of disconnection than for males.

Of course, it is difficult to interpret these coefficients from the hazard functions. While African-Americans and Hispanics may be more likely to disconnect in any given period, for example, simply viewing the coefficients does not give us a good idea as to the practical implications of these effects. Therefore, Tables 2.6 and 2.7 display the estimated probability of disconnecting by the given ages for youth with various combinations of characteristics. Both tables use the definition of disconnection in which one is disconnected if they are not working,

[10] Unfortunately, while the NLSY79 is analogous to the NLSY97 in many ways, the earlier survey does not include a comparable variable describing government aid receipt.

not enrolled, and not married (i.e., the "S" definition). For each type of profile given in Tables 2.6 and 2.7 – for example, being white, having parents who dropped out of high school, and having parents who were on government aid during the youth's childhood – we use the coefficient estimates from Tables 2.4 and 2.5, respectively, to calculate the fitted hazard rates. Then we manipulate these period-by-period estimated hazard rates to get the implied probability that a youth with the given profile has disconnected by each age. Results are presented for ages 15 through 22, and for five possible profiles.[11]

Table 2.6 performs this simple exercise for young men. The baseline profile we use appears in the first column, and consists of individuals who are non-black/non-Hispanic and have parents who never completed high school and never used government aid in the youth's childhood. By age 18, there is a 9.8 percent chance that a youth with this profile will have experienced a disconnection spell at some point. By age 22, this probability has increased to 33.5 percent. The second column allows us to see the effect of government aid use by parents before the survey period on the estimated probability of disconnection. By age 18, the probability of disconnection has gone up to 14.8 percent, 5 percentage points larger than for the baseline profile. By age 22, this gap between the second profile and the baseline profile has increased to more than 13 percentage points. This clearly illustrates the importance of the characteristics associated with government aid use in determining who will and will not become disconnected. The third column in Table 2.6 illustrates the role of parents' education, differing from the baseline profile only because the highest educated parent was a college graduate. For this profile, there is still a 14% chance of experiencing a disconnection spell by age 22, but this is markedly smaller than the first two columns. Clearly, parental education – which proxies for a number of possible family characteristics and preferences that we cannot observe – is extremely strongly associated with disconnection. The final two columns assess the importance of racial differences in disconnection probabilities by any given age. These two columns should be compared with the second column of the table, since all three profiles have parents who did not complete high school and who used government aid. For the Hispanic profile, the number at any given age does not differ markedly from that of their white counterpart. For instance, by age 18, there is a 14.8 percent chance that a white youth with the given parental characteristics will have become disconnected, while there is a 16.4 percent chance that a Hispanic youth will. However, the gap at any given age is much more significant for black youth. The estimated coefficients imply that by age 22, a black youth with the given parental characteristics has a 71.2 percent chance of having been disconnected at some point. Comparing this with the corresponding 33.5 percent number for our baseline profile suggests the importance of considering combinations of characteristics.

This method can be repeated using the coefficient estimates for the female sample. Table 2.7 shows the results, which have the same basic pattern as the results for men. Comparing the baseline profile in the first column with the second column, we see that government aid use before the survey is again associated with a much larger probability of having been disconnected by any given age. For instance, by age 22, the probabilities of having been disconnected are 28.8 percent and 46.8 percent for the baseline profile and the alternate profile, respectively, where only government aid use is changed. Just as for men, the third column illustrates the important

[11] Results for other profiles are available upon request.

association between parental education and disconnection. Finally, we again see that blacks and Hispanics have a significantly larger probability of disconnection by any given age, with Hispanics only slightly larger than their white counterparts, but Blacks much higher (62.6 percent versus 46.8 percent by age 22).

A comparison of Tables 2.7 and 2.6 also brings out several insights. For white and black females, the probability of disconnection is smaller than for their male counterparts, by almost every age. This is related to some degree with the fact we have seen above that marriage plays a very important role for young women. But this same regularity does not hold for Hispanics, with the probability of disconnection being slightly higher for men at certain early ages and higher for women at other ages. The manner in which age enters into the hazards differently for men and women allows for this switching in ordering at different ages.

In this section, we have set up a simple statistical framework and used it to gain insight into the timing and pattern of youths' first spells of disconnection. In a previous sub-section, we saw that by age 23, a substantial fraction of youth have experienced a disconnection spell. The actual level of disconnection varies depending on the definition used, and varies differently for males and females (with marriage and co-habitation playing a more important role for females); but the patterns in timing are similar regardless of the definition used. In this sub-section, we have exploited the presence of the covariates in the duration model to understand how various demographic characteristics are associated with the likelihood of experiencing a first disconnection spell. While there are important differences in these associations across males and females, some general patterns emerge. Hispanics and blacks tend to face a higher chance of experiencing a first spell by any given age than whites, with the effect for Hispanics not always very large or statistically significant, but with the effect for blacks consistently large. Parental education achievement is strongly associated with lower disconnection, while parental participation in government aid programs is strongly correlated with higher disconnection. Of course, these results pertain only to youths' first spells of disconnection. To better understand the trajectories experienced by disconnected youth, we must go a step further.

3. Extent of Long-Term Disconnection

The previous analysis depicts the tendency of various youths to experience some disconnection in their teens and twenties, but this information alone is insufficient to assess whether these youth endure long periods of disconnection. Two statistical phenomena determine the amount of time a youth spends disconnected: the lengths of spells, and the tendency of a youth who reconnects to re-experience another disconnection episode.

The following discussion develops information about these phenomena. The section opens with an empirical analysis of the extent to which a youth reconnects after first falling into a disconnection state, an event that defines the length of the first spell of disconnection. The discussion next summarizes the prospects that a youth who has reconnected fails again, experiencing a renewed disconnection episode and multiple spells. Finally, the section ends with a characterization of those youth who make up the long-term disconnected population.

3.1 Tendency to Reconnect

To assess the tendency of youths to reconnect, we estimate the conditional hazard function $P_i(t,Z|K)$, where K indicates the conditioning event, in this case the beginning of the first spell of disconnection, and t represents quarters since the conditioning event occurs. We measure re-connection according to the definition discussed in Section 2. The vector Z includes the race dummy variables interacted with gender, a set of dummy variables for parental education, a government aid variable, dummy variables for having experiences such as a child birth before the start of the disconnection spell, and a set of dummy variables that indicate the age at which the individual first experienced a spell of disconnection. We also include a set of three splines, where J=3, $\Phi_{i0}(t)=1$ and $\Phi_{i4}(t)=0$. We set $\mu_{i1}= 4$ *(1 year),* $\mu_{i2} = 12$ *(3 years)*, and $\sigma_1=\sigma_2=2$. In order to obtain separate estimates for males and females, we evaluate the mean of the fitted values conditional on gender.

Figure 3.1 depicts the rates of re-connection. It shows that re-connection rates peak about two years after the individual initially begins a spell of disconnection. The figure also indicates that there is not a substantial difference in rates of re-connection between males and females. Figure 3.2 plots the corresponding failure functions, which represent the probability of experiencing a re-connection episode. For example, the figure indicates that 6 quarters after re-connection, approximately 50 percent of individuals have reconnected. We extend these predictions to 4 years after initial disconnection and see that there is a small population (slightly under 10 percent) that never reconnects. This figure offers one interpretation of "long-term" disconnection. We can think of long-term disconnection as the complement to this graph (i.e., the individuals who do not reconnect for a substantial period of time, if ever).

Table 3.1 reports the coefficient estimates from the conditional logit model used to predict the hazard rates for re-connection. For each definition, we now report three specifications but focus on the third, which contains a full set of covariates. A negative coefficient estimate implies that a variable is associated with a lower probability of reconnecting; an individual with that characteristic would be more likely to experience a longer spell of disconnection. Unfortunately,

essentially none of the coefficients are significant. This provides us with a negative conclusion. Conditional on observing that an individual disconnects, observable characteristics do not provide any further information about which individuals are likely to experience long spells of disconnection.

3.2 Likelihood of Multiple Disconnection Episodes

The second component of the amount of time spent in a disconnected state is the probability that an individual experiences a second spell of disconnection conditional on disconnecting once and then reconnecting. We again estimate $P_i(t,Z|K)$, where the conditioning event K now indicates the beginning of the spell of re-connection, and we estimate the likelihood of experiencing a new episode of disconnection as a function of time since re-connection. The splines and covariates are identical to those specified in Section 3.1, with a minor change. The dummy variables for experience now include two variables denoting whether or not a youth gave birth or was convicted of a crime during his/her first disconnection spell.[12]

Figure 3.3 illustrates the failure functions for a second spell of disconnection. For example, approximately 25 percent of both males and females will have experienced a second episode of disconnection within the first year and a half after reconnecting. Overall, approximately half of the individuals who reconnect experience another spell of disconnection within four years according to the no work-no school definition. Using the spouse definition, the incidence of second spells of disconnection is lower by 5 to 10 percentage points, but still substantial. Finally, the shape of the failure function suggests a fairly constant hazard rate over time. Importantly, this suggests that there are not easy-to-identify points at which reconnected youth are most likely to fall into disconnection again.

The figure provides evidence on the timing and prevalence of re-disconnection for males and females taken as a whole. However, just as above, we would like to gain a better idea of how re-disconnection varies across demographic characteristics. Table 3.2 is similar to Table 3.1 in that it reports coefficient estimates for the underlying conditional logit specification. Unlike the logit model for re-connection, a few of the coefficients are significant. First, using the spouse definition, blacks are significantly more likely to experience renewed spells of disconnection. This is not true under the "N" definition, again suggesting that marital patterns for blacks may be unique. Second, the coefficient on advanced degree is large and negative, indicating that conditional on reconnecting, individuals with a parent holding an advanced degree are significantly less likely to experience a second spell of disconnection relative to individuals whose parents did not graduate from high school. In addition, a few of the coefficients on the age dummy variables are significant. These variables indicate the age at which the individual first disconnected. Although not all estimates are statistically significant, and the magnitudes do not change monotonically with age, the fact that the coefficients trend away from zero suggests that individuals who disconnect at an early age are much more likely to experience a second spell of disconnection conditional on reconnecting.

[12] We do not include a dummy variable for whether or not a youth dropped out of high school during the first disconnection spell because such a variable has a value of zero for every youth in the sample.

3.3 Characterizing Youth Experiencing Long-Term Disconnection

Thus far, we have employed duration models to describe the time until first disconnection, until first re-connection conditional on disconnection, and first re-disconnection conditional on re-connection. The estimates from these models have shown which characteristics are associated with greater disconnection and re-connection rates. However, we may be interested in related issues regarding the composition and characteristics of the disconnected population, such as how many of those experiencing a disconnection spell are from each racial group. The results discussed above do not speak directly to these issues.

In order to characterize youth experiencing first and second spells of disconnection, we use a simple simulation apparatus that relies on the estimated hazard rates from above. A distinct advantage of this approach, as opposed to an approach that tries to estimate analogous characteristics directly from the survey data, is that the survey data have significant censoring. This prevents us from having entire histories of disconnection on most people in the survey. But the estimated hazards, which take into account right censoring, allow us to construct quarter-by-quarter pseudo-histories from age 13 through age 22 (40 quarters in all) for all youth in the NLSY97 sample.

The simulation framework is straightforward. Consider a given individual from the survey, with a particular set of demographic characteristics (gender, race, and parent's education).[13] We estimate the duration model for first disconnection and calculate the implied estimated hazard rates and failure function for that set of characteristics. Then, by comparing a random draw from the uniform distribution with the estimated failure function, we determine whether that person ever enters a disconnection spell, and if they do, the age at which they enter. Next, we estimate the duration model for re-connection, draw another random number for the individual, compare the draw with the estimated survivor function for re-connection for the given profile of characteristics, and then determine whether and when the individual reconnects (if, of course, the individual disconnects at some point in the first step). Finally, we do the same for re-disconnection, or entering into a second spell. This provides a simulated history of disconnection, up through the beginning of a second disconnection spell, for every individual in the sample. To overcome the error induced by this mechanism, we repeat this process for the entire sample ten times, and stack all ten sets of pseudo-histories to form a final simulated data set for use in analysis.

Table 3.3 provides a large range of statistics estimated from this simulated data set. As stated in the table, the simulation uses the spouse definition of disconnection, which defines disconnected months as months of not working, not being enrolled, and not being married. Estimates using the other definitions of disconnection are available upon request. The first column of the table shows what percentage of the youth population in the U.S. is made up of by each of the indicated groups. For instance, females compose an estimated 48.7 percent of the youth population, while females with a college graduate parent compose 7.7 percent of the youth

[13] In the simulation of re-connection and re-disconnection, we do not use the dummy variables for experiences such as child birth before or during disconnection. We believe that the fit of our estimated hazard rates is adequate without these additional covariates, and incorporating these covariates would include a number of complications regardless.

population. The second column provides the percentage of the given group that experiences at least one spell of disconnection. For example, the experiences of males and females are very similar, as we would have anticipated from the survivor functions shown before. We see that 29.3 percent and 29.1 percent of males and females, respectively, experience at least one disconnection spell. Going down the column, one sees extremely high rates of disconnection for blacks and for youth with parents who did not complete high school. As the education level of the parents increases, the percentage of the group experiencing disconnection falls markedly. For the highest education level, the percentage is only 13.3 percent for all youth, with a higher percentage for males than females at this education level.

In order to understand better the composition of the disconnected population, we can look at column 3. This column gives the percentage of all youth experiencing a disconnection spell who fall into each of the given groups. Children of parents who never completed high school make up 30 percent of the youth who have at least one disconnection spell, with male children of high school dropouts making up 15.9 percent and females, 14.1 percent. The proportions in this column can be compared with the first column in order to understand which groups are disproportionately represented in the disconnected population. Children of high school dropout parents are disproportionately represented, for instance, making up only 17.2 percent of all youth but 30 percent of those with at least one spell of disconnection. Black youth make up 15.4 percent of the population, but almost 26 percent of the youth who have experienced a disconnection spell.

The next eight columns of the table provide a variety of information about characteristics of youths' first spell of disconnection. All results are conditional on experiencing at least one disconnection spell. The first of these depicts the average age at start of first spell for each of the given groups. Somewhat surprisingly, there is not much variation from group to group, with most beginning disconnection around age 19. This age is situated at the transition between high school and the labor market or higher education.

Looking at the following four columns of the table, one can make comparisons across groups for the length of the first disconnection spell, expressed in quarters. There is more variation here than for the mean age at first disconnection. Except in the case of Hispanics, males tend to have longer first spells of disconnection than females for every group. Overall, males' first spells last about 6 quarters, or 24 months, on average, while females' spells last slightly less. Of all the groups presented in the table, black males appear to have the longest first spells; on average, their first spells are 7 quarters, or 28 months, and 20 percent of them have spells that last 10 or more quarters.

The next three columns pose another way of understanding long-term disconnection. Each column presents the percent of the group that has more than a certain number of years of disconnection. While 72.8 percent of youth experiencing disconnection have a spell longer than 1 year, only 7 percent have a spell longer than 3 years. In comparing the various racial groups along these dimensions, we see that Hispanics' experiences are fairly in line with those of whites and others. This is subject to the caveat that Hispanic females seem more prone to longer bouts of disconnection than females from the white and other group. But the row that stands out in the racial groups panel is that for black males. We note that 12.3 percent of Black males with first

spells have their first spell last more than an extraordinary 3 years. Moving down to the parental education panel, the patterns that we would expect emerge clearly. Youth with lower educated parents tend to be more likely to experience long-term disconnection, though the differences from one education group to the next are not especially striking in magnitude.

Though the attributes of youths' first spell of disconnection are important, we need more information to understand the phenomenon of long-term disconnection. In particular, a short initial disconnection spell for an individual is comforting only if that youth is able to remain connected after the spell for a long period of time. A youth who has a short first spell and then a short period of connection before re-entering disconnection may also fall into the long-term disconnection group we are most concerned with. In view of this, we examine a number of characteristics of those with two spells of disconnection. The results from this examination are presented in the remainder of Table 3.3, and are structured in a manner similar to the results for characteristics of the first spell of disconnection.

There are two columns under the heading of "Incidence of Two Spells of Disconnection". The first of these gives the percentage of the given group who have experienced two or more spells of disconnection. The second of the two columns shows how much of the population of youth with two or more spells is made up of by each group. For example, we see that 6.5 percent of all male youth, and 5.5 percent of female youth, experienced two spells of disconnection. If we look at all the youth who had two or more spells, the composition is tilted disproportionately toward males, with males making up more than 55 percent of these youth. Blacks and children of lower educated parents are again disproportionately represented in the set of youth with two spells, and even more strongly so than for the case of first spells. If we look at the highest education group, only a tiny fraction of youth from this group experience two disconnection spells, and this group makes up only a small fraction of all youth with two or more spells.

The remainder of Table 3.3 fills one more important gap in the analysis thus far. We know certain types of youth are more likely to have first and second disconnection spells and longer first spells. But for how long are the youth who have a second spell connected in between spells? The final six columns illustrate characteristics of the re-connection period between spells for youth who experience two spells. The columns that give statistics on the length of the re-connection period do not show a high degree of variation across groups. Higher education groups tend to have higher average lengths of re-connection, but this relationship is not monotonic, and the differences are not large. For all groups, males appear to have slightly shorter re-connection periods than females. The smallest average length of re-connection in the entire table belongs to black males, at 6.1 quarters (or about 24 months).

The final two columns of Table 3.3 take a slightly different perspective, answering the question of what percentage of youth from a given group who experience two spells have a re-connection period longer than one year and two years. Of all youth experiencing a second spell, 70.1 percent have a re-connection period longer than one year, while 35.3 percent experience re-connection for longer than two years. Again, females perform better than males in terms of having longer re-connection. Looking at the panel with the various racial groups, we see that black males have lower rates of long-term connection than others, though the gap is not huge. Hispanics as a whole out-perform the other groups by these measures, though again not by much.

Interestingly, a higher percentage of Hispanic females than males tend to have long-term re-connection, with 74 percent having more than a year and 39.9 percent having more than two years. To an extent, this makes up for higher propensities toward initial disconnection among Hispanic females. Finally, it is difficult to decipher any particular pattern in the bottom panel, concerning parent's education level. The one clear insight from this panel is that youth with a parent in the highest education level tend to have a greater share reconnecting for more than a year and more than two years.

In this section, we have supplemented the discussion from Section 2 with duration models for re-connection and re-disconnection. These additions give us a framework to examine long-term disconnection. In regards to re-connection, we find little association between our covariates and the probability of reconnecting. This result, though by no means definitive, casts some doubt on the hope that policy-makers can identify those disconnected youth most likely and least likely to reconnect. For re-disconnection, the factors associated with initial disconnection tend to again play a role here. Based on the simulation apparatus from this sub-section, elements of many demographic groups experience long-term disconnection, but the results are particularly worrisome for the children of low-educated parents and for black youth, especially black males.

4. Change in Youths' Disconnection Experiences Over the Past Two Decades

Given the picture of disconnection conveyed by the above findings for youth in current day America, one wonders how this picture has changed in recent years. This section addresses this question by comparing today's experiences with those seen twenty years ago in the 1980s. The analysis conducts this comparison exploiting data from the NLSY79, a survey entirely compatible with the NLSY97. This section documents changes in the patterns of: initial disconnection rates, re-connection rates, and multiple disconnection episodes. Integrating these findings reveals not only whether disconnection has become more pronounced in recent years, but also which groups have become more inclined to experience disconnection.

4.1 Change in Patterns of Disconnection Rates

We begin by comparing fitted hazard rates for the first episode of disconnection between the two cohorts. The construction of these figures is discussed in Section 2.4. The figures for the NLSY79 data are constructed analogously to the figures for the NLSY97 data.[14] Figures 4.1 and 4.2 plot the fitted hazard rates for males and females, respectively, and tell a very interesting story. The NLSY79 cohorts are significantly more likely to disconnect early in life (during the age range in which most youths are attending high school), experience a higher peak around age 18, but then experience lower rates of disconnection after age 20. The NLSY97 cohorts exhibit a much different pattern with little disconnection early, an increase around age 18 and then a fairly constant hazard rate (which exceeds that of the NLSY79 cohorts) through the college-age years. Although the NLSY97 hazards are greater than the NLSY79 hazards after age 20, it does not appear to be sufficient for the overall probabilities of disconnection to catch up. The difference in hazards at younger ages suggests that schooling is an important reason for the differences in disconnection between the two surveys. We examine this hypothesis further in Section 5.2. Comparing results across figures indicates that the spouse definition makes a much bigger difference for females in both the NLSY79 and NLSY97 cohorts.

Figures 4.3 and 4.4 plot the failure functions for males and females, respectively. They show that the percent of people disconnecting amongst the NLSY97 cohorts does not catch up despite the fact that the hazards are higher than amongst the NLSY79 cohorts after age 20. Overall, in the NLSY97 data approximately 20 percent of individuals experience a spell of disconnection by age 20 and 30 percent by age 22. The rates of disconnection were 10-15 percent higher in the NLSY79 data and most of the separation occurs before age 18. Comparing results across figures, females are similar to males except that females' NLSY97 rates of disconnection nearly catch up to their NLSY79 rates by age 23 under the spouse definition. This result suggests that marriage was a more common option among women unemployed and not enrolled for long stretches of time in the 1980s than in the late 1990s.

[14] Since NLSY79 lacks a variable comparable to the government aid variable used in Sections 2 and 3, we use a specification that includes just race and parent education variables in this section.

4.2 Change in Patterns of Re-connection Rates

Youth in the 1980s faced a higher chance of experiencing a first disconnection spell by any age than that faced by youth in the late 1990s. The natural follow-up question is: Conditional on disconnecting, are there differences over time in the timing and level of re-connection? Figures 4.5 and 4.6 report the hazard rates for the probability of reconnecting for males and females, respectively. These figures are constructed in a manner completely analogous to the figures discussed in Section 3 above. Four quarters after first disconnecting (by either definition), the proportion of youths who have reconnected is very close between the NLSY79 and NLSY97 data, especially for young men. Larger differences between the two surveys emerge farther from first disconnection, where it appears the situation has again improved over time. Two years after first disconnection, the gap between NLSY79 and NLSY97 is roughly 5 to 10 percentage points depending on the definition used. Again the gaps for females are larger than those for males. At four years out, there is still a gap of 3 to 5 percentage points. This suggests long-term disconnection was a greater problem in the 1980s than now. To an extent, this difference is mitigated by marriage, as the curves using the spouse definition show. But it appears that disconnected youth had at least a slightly easier time reconnecting in the late 1990s than in the early 1980s.

4.3 Change in Patterns of Multiple Disconnection Episodes

The figures in Sections 4.1 and 4.2 suggest that the earlier cohorts were more likely to enter a state of disconnection and less likely to exit it. We can also examine the relative probabilities of experiencing a second episode of disconnection. Figures 4.7 and 4.8 plot these probabilities. The methodology underlying these survivor functions appears in the discussion for Figure 3.3 above. These figures are the first to show a deterioration between the NLSY79 cohorts and their NLSY97 counterparts. Young men, in particular, are more likely to experience a second spell of disconnection in the late 1990's relative to the early 1980's. For males, the probability of returning to disconnection is roughly 10 percentage points higher under the no work-no school definition and 5 percentage points higher under the spouse definition. And while the profile for NLSY79 starts to level after about 2.5 years, young men in the later cohorts continue to experience second spells at about the same rate. As a result, if we look four years after re-connection, young men in the 1990's are roughly 15 percentage points more likely to experience a second episode of disconnection relative to their counterparts in the 1980's. Females, on the other hand, are slightly better off in the later survey, at least up to three years after reconnecting. The failure functions suggest that the NLSY79 hazard rates decline slightly more after that point, but the probabilities of experiencing a second spell for young women are roughly equivalent for a good part of the duration since re-connection.

4.4 Changes in Groups More Inclined to Become Disconnected

Tables 4.1 and 4.2 report the coefficient estimates of the hazard rates for males and females, respectively. These figures are comparable to Tables 2.4 and 2.5. In fact, the results are quite similar. The coefficient on “Black” is positive and significant for both males and females, indicating that blacks are significantly more likely to experience a spell of disconnection than their white counterparts. The coefficients on “Hispanic” are significant for females (and lower in

magnitude than for blacks), but not for males. This suggests that Hispanic females are more likely than white females, but less likely than black females, to disconnect. Hispanic males, on the other hand, are no more likely to disconnect than their white counterparts. The coefficients on parent education are negative, significant and generally monotonically trend away from zero, indicating that individuals with highly educated parents are less likely experience disconnection. We observed similar patterns in the NLSY97 data.

Table 4.3 reports the coefficients from the hazard rates for re-connection. This table highlights several points. First, the age at first disconnection does not matter much in predicting re-connection; all of the age dummies are insignificant. The parental education coefficient estimates point to higher re-connection among children of parents who graduated from college, but the coefficients do not increase monotonically in completed education. Black females are less likely to reconnect, while the coefficients on "Hispanic" are only marginally significant. The association of race with re-connection is murkier for males, as the coefficients on the race-gender interactions are either insignificant from zero or positive, statistically significant, and relatively large. It does not appear that male and blackmale are jointly significantly different from zero. The picture we gain here is richer than that from NLSY97, where almost all coefficients were statistically insignificant. In NLSY79, we have a better idea of what types of people tend to reconnect more quickly. Finally, the second specification indicates that the variables describing a youth's experience prior to disconnection (i.e., whether the youth gave birth and/or dropped out of school) have no bearing on the propensity to reconnect.[15]

Similarly, Table 4.4 reports the coefficients of the logit model associated with second spells of disconnection. Relative to an initial age of disconnection of 16, having a higher initial age is associated with a lower probability of disconnecting a second time. This relationship is not monotonic with age, though. The NLSY97 results are different, but have a similar flavor. Higher parental education is associated with a lower probability of re-disconnecting, but this relationship is not monotonic and only the coefficients on the "some college" and "college graduate" dummies are statistically significant under both definitions. Under the baseline definition, black males are more likely to re-disconnect than other males (just as in the 1997 survey), but males as a whole are less likely to disconnect a second time than females. However, both of these effects become insignificant under the spouse definition. The change in the male dummy suggests that women are staying connected through marriage more than men in the early 1980s. The fact that this change does not occur in the 1997 results (where the male dummy is always insignificant) points to changes in marital patterns among at-risk youth over time.

[15] The NLSY79 does not have information on crime analogous to that for the 1997 survey; therefore, we omit a criminal experience variable (like that used in Section 3) from the specification.

5. Factors Underlying Lowered Incidence of Disconnection in Recent Years

In light of the large declines seen in youths' disconnection since the 1980s, the question arises about what factors underlie these trends. This section initially explores what changes have occurred in the makeup of the long-term disconnected population. It next shows the role played by higher educational attainment in explaining the lower disconnection rates.

5.1 Changes in the Makeup of the Long-Term Disconnected Population

Patterns of disconnection have changed in substantial ways over the past two decades. These changes are largely positive. Young men and women are much less likely to experience disconnection today than they were in the early 1980's. As we show in the next section, changes in patterns of educational attainment appear to be largely responsible for these changes. In addition to a lower likelihood of entry into a disconnection status, youth in the past decade tend to experience slightly shorter first spells of disconnection. This difference exists for both males and females but is particularly marked for young women. On the other hand, males experience much higher rates of recidivism in the late 1990's. Conditional on completing one spell of disconnection, these young men are much less likely to maintain connections to society than their counterparts from the early eighties. Conversely, young women experience roughly equal rates of recidivism across the two surveys, although the profiles differ slightly over time. Our results suggest that circumstances for youth at risk of becoming disconnected have improved, largely due to success at keeping young people in school. However, for select groups of the most at-risk population – in particular, young men who do disconnect – circumstances have worsened.

5.2 Higher Educational Attainment Explains Much of the Gains

Educational attainment and labor force participation comprise the two main components of our definition of disconnection. In this section, we offer evidence that changes in patterns of educational attainment are primarily responsible for the decline in disconnection between the 1980's and 1990's. Our methodology in this section is similar to that of the rest of the paper. We use the same duration analysis to estimate the probability of dropping out of school.[16] In particular, we use the same specification of the spline function and the same covariates as in Section 2.4.

Figure 5.1 reports the failure functions for first drop-out for young men and women in NLSY79 and NLSY97. The figure clearly illustrates that youth in the 1980's began dropping out of school approximately two years earlier than in the 1990's. In particular, youths in NLSY79 begin dropping out of school around age 13 while youths in NLSY97 do not start to drop out until age 15. Once drop-outs begin, the failure functions suggest that the hazard rates are fairly constant and similar between the two surveys. The difference in starting ages leads to a 10 to 15 percentage point difference in dropout probabilities at any age. The failure functions level out at age 19 indicating that by that age individuals have either graduated or dropped out.

[16] We define an individual to have dropped out of school if we observe her to be not enrolled and without a high school diploma. As above, our definition of enrollment accounts for short absences from school.

Dropping out does not necessarily correspond to disconnection because some youths immediately find employment. To investigate this possibility, we estimate $P_i(t,Z|K)$ where the conditioning event K is a drop-out and the event i is either entry into the labor market or a return to school.[17] Figure 5.2 reports the survivor functions for these two events. The figure shows that the NLSY79 and NLSY97 cohorts are as likely to become employed conditional on dropping out. Roughly 50 percent start working in the same quarter they drop out, and after a year more than 80 percent have found some form of employment. However, the NLSY97 cohorts are much more likely to return to school. One year after dropping out, the NLSY97 cohorts are roughly 10 percentage points more likely to have returned to school relative to the NLSY79 cohorts.

From these two figures a coherent story emerges. The NLSY97 cohorts are less likely to leave school and, conditional on leaving school, are much more likely to return to school. The fact that labor market participation conditional on dropping out is nearly identical across surveys suggests that changes in enrollment patterns over the last 20 years are largely responsible for the reduction in disconnection between the 1979 and 1997 surveys.

[17] We use a weak definition for entry into the labor market. If an individual reports working at least one hour in a month, then we consider that individual to be employed.

6. Concluding Remarks

This paper uncovers a variety of interesting insights into the experiences of America's disconnected youth over the past twenty years. An attractive feature of our approach involves the introduction of concrete measures of disconnection episodes, which enables implementation of statistical duration models to characterizes youths' transitions to and from disconnection statuses. We develop profiles for youth entertaining three concepts of disconnection which span the definitions found elsewhere in the literature. One concept interprets disconnection as a situation when a youth neither works nor goes to school (status "N"); a second further narrows disconnection to require that an individual also has no spouse (status "S"); and a third expands spouse to include a cohabiting partner (status "C"). In our analysis, the start of a disconnection episode corresponds to the earliest month after which a concentrated sequence of months follows with a youth classified as being disconnected. A spell ends when this individual experiences a sufficient concentration of reconnected months. This mechanism permits one to time disconnection events, which provides a framework for evaluating the effectiveness of various policy interventions in preventing youths from falling into disconnected statuses and in assisting youths to escape from disconnected states when prevention fails. Moreover, this framework offers the potential of discovering gaps in our present systems of services that constitute opportunities for improving the prospects of high-risk youth.

6.1 Summary of Empirical Findings

According to the profiles developed in this study, young women are more likely to experience a disconnection episode than men throughout their late teens and early twenties if one interprets disconnection as not working and not in an educational activity, but the opposite is true if one reinterprets disconnection as also excluding youths who live with a spouse. In particular, the likelihood of no-work/no-school disconnection for women exceeds that of men by 0.5 percentage points at age 17 with the differential steadily growing to 2 points by age 22. Adopting instead the no-work/no-school/no-spouse definition, women and men start with virtually the same likelihood of becoming disconnected by age 17; after age 17, women temporarily experience lower disconnection rates than men – by as much as 2 percentage points – but women eventually catch up with men by age 23.

The disconnection profiles of men reveal that rates for the two concepts of disconnection closely track one another until age 20, after which the differential between the profiles slowly widens to reach almost 3 percentage points by age 22. According to the no-work/no-school/no-spouse concept, which leads to lower rates by definition, nearly 5 percent of men experience some episode of disconnection by age 17; this share increases to 8 percent by age 18, to 14 percent by age 19, to 19 percent by age 20, and to almost 27 percent by age 22. Moreover, disconnection rates vary substantially among young men with different demographic characteristics. A white male whose parents dropped out of high school, for example, has about twice the chance of experiencing disconnection in his late teens and early twenties compared to a young man whose parents graduated from college. A black male from a disadvantaged background has from a 100 percent (late teens) to a 50 percent (early twenties) higher likelihood

of becoming disconnected than a young white man from such a background, and a 75 percent to a 40 percent greater chance than a young male of Hispanic ethnicity.

The profiles for women for the two notions of disconnection diverge steadily during their late teens and twenties. For the no-work/no-school/no-spouse definition, about 4 percent of women experience some episode of disconnection by age 17; this share rises to 7 percent by age 18, to 12 percent by age 19, to 17 percent by age 20, and to 26 percent by age 22. The profile for the no-work/no-school concept structurally exceeds these values, starting at 1 percentage point higher at age 17 and expanding to 5 percentage points higher by age 22. The variation in disconnection rates across young women follows a pattern similar to that for men. A white woman whose parents dropped out of high school has about a three times greater likelihood of experiencing disconnection in her late teens and early twenties than a woman whose parents graduated from college. A black woman from a disadvantaged background has from a 60 percent (late teens) to a 30 percent (early twenties) higher likelihood of disconnection than a white woman from such a background, and a 30 percent to 20 percent greater risk than a woman of Hispanic ethnicity.

Youth enduring long-term disconnection do so by undergoing long episodes or multiple reentries into disconnected states. Young men and women have similar experiences for both of these events. In particular, among youth beginning their first disconnection episode, slightly more than 70 percent remain disconnected after one year; nearly 30 percent still have not reconnected after two years; and approximately 7 percent continue their disconnection spell after three years. For young men who successfully terminate their initial spell and reconnect, 16 percent renew their disconnection status within one year, 33 percent within two years, and 44 percent within three. For women who successfully escape from disconnection, 11 percent re-experience disconnection within one year, 24 percent within two, and 33 percent within three years. While women appear to avoid renewed disconnection episodes more successfully than men, the estimated differences in re-connection and re-disconnection rates are not statistically significant for men and women.

Turning to other characteristics, the long-term incidence of disconnection does vary across race/ethnicity groups and across attributes signaling adverse events in a youth's history. Casual inspection of the estimates describing spell lengths suggests that black youths tend to end disconnection episodes later than whites and Hispanics, but the estimated impacts are not statistically significant. Nor are the estimated coefficients measuring the influence of such adverse events as giving birth, being convicted of a crime or dropping out of high school prior to becoming initially disconnected. The empirical findings, however, do reveal statistically significant differences in the factors linked to rates of experiencing renewed spells of disconnection for those successfully escaping their initial spell. Black youth are more inclined than either whites or Hispanics to renew their disconnection status, as are those youth who were convicted of a crime and who dropped out of high school prior to their first disconnection episode. Consequently, the makeup of the long-term disconnected population disproportionately comes from black youth – slightly more black men than black women – and youth with criminal records and low education. This occurs not because these groups have longer disconnection spells than others, but because they have more spells.

Contrary to conventional wisdom, fewer youth in today's America suffer disconnection episodes than youth two decades ago. Beyond age 15, the likelihood of becoming disconnected now is about 10 percentage points lower than in the early 1980s . The principal explanation for this decline can been seen in patterns of educational attainment; today's youth are not only less likely to leave school, but conditional upon leaving, they are also more inclined to return to school. In addition to lower initial disconnection rates, the typical duration of disconnection spells is shorter today than twenty years ago. While only a slight advantage exists for young men in spell lengths, the advantage for young women is approximately 10 percentage points at the two-year spell mark. The picture for the late 1990s and early 2000s compared to the early 1980s is less clear when relating the rates at which reconnected youth experience renewed disconnection episodes. Whereas the empirical results show virtually no differences in these rates for women, in recent years young men exhibit marginally higher rates of renewed disconnection – by about 5 percentage points two years after re-connection. This latter finding combined with the former suggests that the persistence of disconnection among young men may be somewhat higher now than two decades ago, even though fewer young men see any disconnection at all.

6.2 Policy Challenges

This study's empirical framework and its findings can assist policy makers in identifying opportunities for interventions aimed either at preventing youths' disconnections or at inducing re-connections. Promising candidates for intervention points comprise those times when at-risk youth already receive public services or become involved in government programs. When not in contact with such services/programs, policy makers face the formidable task of even finding youth who are currently or soon-to-be disconnected. In contrast, during times of involvement with government agencies, at-risk youth can not only be found, but service providers can potentially direct incremental resources to counter adverse circumstances. A key set of policy questions, then, considers whether and when disconnected youth access government programs. While comprehensive answers to these questions are beyond the scope of this study, supplementing our empirical analysis with activity data from the NLSY97 offers a valuable setting to explore the degree to which disconnected youth access programs at all, and whether such access occurs before or after disconnection episodes.

Table 6.1 summarizes the contacts of disconnected youths with various government agencies (left columns), and compares these experiences with those of the never-disconnected youths (right columns). The table presents results for several definitions of disconnection ("N", "S", and "C"), with each cell showing the percentage of the group that ever reported involvement with the type of government contact specified in the rows of the table. For instance, 17.8% of "N" disconnected youth participated in a training program either directly operated or paid for by federal or local government. In contrast, only 10.6% of those who were never "N" disconnected enrolled in such training. Comparisons of the findings across the three definitions of disconnection reveals similar patterns, with the understandable exceptions of WIC and Food Stamps; in the case of these food-support programs, receipt of benefits requires the presence of children in the household and the spouse/cohabitation classifications in the never-disconnected group are far more likely to indicate the presence of children than for the sometimes-disconnected group.

Examining results for the no-work/no-school/no-spouse notion of disconnection, Table 6.1 reveals substantial use of public assistance among the disconnected youth; more than 42% participate in some government welfare during the period covered by the survey. Much of this participation comes through WIC and Food Stamps. In sharp contrast, merely 18.1% of the never-disconnected youth report any involvement with the welfare system. We see that the percentage of youth who ever receive unemployment insurance benefits is almost twice as high among the disconnected compared to the never disconnected (9.0% versus 5.4%). More striking than any of these figures are the percentages of youth experiencing contact with the juvenile justice system, either through arrests, being charged with a crime, or being convicted of a crime. We see that 39.6% of disconnected youth were arrested at some point, while only 20.7% of the never disconnected were. While the self-reporting arrest rates supplied by NLSY97 may seem high, they are not out of line with aggregate rates published in government sources.

While Table 6.1 conveys overall involvement of the disconnected youth with government services and programs, it does not reveal whether contacts occur before or after entry into disconnection. This timing is vital for thinking about policies directed towards high-risk youth. In particular, if most of the contact occurs after a first disconnection spell begins, then it may not be possible to use these points of contact as avenues to prevent disconnection. However, in this case one could see which programs are the most important safety nets for youth who have had trouble making a normal transition into adulthood.

Table 6.2 presents a first step towards addressing the timing issue. The three panels correspond to different points in the history of disconnected youth, with each column within a panel referring to a specific definition of disconnection. The first panel looks at government contacts in the period prior to the youths' first disconnection spell; the second lists the percentage of youth who had each type of contact during their period of disconnection–specified here to last from the month of a youth's initial disconnection to this person's re-connection or last survey interview; and, finally, the third panel summarizes experiences during and after the first disconnection spell, with contacts after re-connection being counted as well.[18] As in Table 6.1, the principal patterns in Table 6.2 do not depend on the concept of disconnection.

The findings in Table 6.2 suggest considerable opportunities for policy makers to access disconnected youth through their contacts with existing government services and programs. Examining the experiences of the S-disconnected youth, for example, welfare utilization tends to be high prior to a spell and even higher after initial disconnection; whereas 19.9% of these youth use any welfare program before becoming disconnected, 39.5% rely on such programs during and after their spells. This pattern also holds up for individual welfare categories – such as Food Stamps – that make up the "any welfare" contact. In the case of the criminal justice system, more high-risk youth become involved with this system after their initial disconnection episode than prior to this experience. These findings, however, are not easily interpretable. Some criminal experiences undoubtedly directly contribute to the initiation of a disconnection spell and/or to the lengthening of a spell (e.g., due to incarceration). Others may reflect an effort to support one's self through illegal activity, which reflects a result of disconnection rather than a

[18] It is important to keep in mind that the percentages given in the second and third panels of the table are lower bounds for the actual percentage of disconnected youth who experience the given type of contact during or after their first disconnection spell. This is because we only have data on each youth until his/her last survey interview in 2003.

direct cause. At first glance, government training may appear to be a poor source for finding disconnected youth in light of low participation rates. Table 6.2 reveals that 7.2% of the S-disconnected youth participated in a government training program prior to their disconnection, 7.5% during their disconnection spell, and 11.8% during and/or after their disconnection spell. Since Table 6.1 indicates that about 17% of these youth have some experience with training programs, the training figures in Table 6.2 indicate that about half the S-disconnected youth train prior to experiencing their spell and about half after. Thus, even the government training programs offer potential access to about 1 out of 6 disconnected youth.

While involvement by disconnected youth in existing government programs offers promising avenues for assisting their transitions to independent adulthood, successful policy interventions require a comprehensive understanding of how and when youth become disconnected and which youths are at the highest risks. Services must be tailored to youths' specific circumstances. The findings of this paper provide elementary profiles of these circumstances. Building upon our empirical framework can further pinpoint those factors critical in influencing who experiences disconnection and who does not, and who reconnects quickly and permanently and who tends to fail in these efforts. Identifying these factors will play a vital role in targeting programs to those youths and points in time where services can be most effective.

APPENDIX A
Description of Our Data Constructions

The appendix describes in more detail how we construct the samples and variables used in the analysis.

Samples - For NLSY97, we use the cross-section and the oversample and drop all individuals whose panel weight in 2003 equals zero (this drops individuals who attrit and do not return by wave 7). This leaves us with 6,678 individuals in the sample, each of whom is between the ages of 9 and 14 in the first quarter of observation. For NLSY79, we use the cross-section and the oversample, but exclude the white oversample and the military sample. We drop individuals whose panel weight in 1990 equals zero (this drops individuals who attrit and do not return by 1990). Furthermore, we keep only those individuals who we observe at the first quarter of age 16. This leaves us with 3,717 individuals in the sample, each of whom is between the ages of 13 and 16 in the first quarter of observation.

Weights - For NLSY97, we use panel weights from the latest round (i.e. 2003). For NLSY79, we use panel weights from the 1990 round of the survey (when the youngest cohort will be 25).

Enrollment - To measure enrollment, we use the event history schooling variables in the NLSY. These variables report enrollment status of each respondent by month. The event history variables correct for apparent inconsistencies in the way respondents answered other schooling questions (e.g., the reported highest grade completed moves down over time for some respondents). To ensure that we do not count students who are on summer vacation as not enrolled, we only consider respondents to be not enrolled if the month in which they report being not in school is a member of a spell of four or more months of non-enrollment.

Employment - We define an individual to be working in a given month if that individual reports working at least one hour in that month. We consider both regular employment and self-employment. Data on "freelance" work are not available for individuals under age 18 at the time of each survey, but freelance is included in self-employment for those older than 18. The NLSY defines freelance work as self-employment for which an individual earns less than $200 per month (e.g., babysitting).

Births - We define a female to be a teen mother if she gives birth to a child before the age of 18.

Criminal activity - Only available in NLSY97. We define an individual to be involved in criminal activity if she is found convicted of, or plead guilty to, a crime committed by the age of 18.

Dropout - We define a high school dropout as a respondent who is not enrolled and has not received a high school diploma. We use the high school diploma variable rather than the highest grade completed variables because of inconsistencies in the latter.

Foster children - We define foster children as those respondents who report not living with biological parents, adoptive parents, or foster parents before the age of 18.

Parental education - We obtain parents' educational background from the parent retrospective survey. We consider the highest grade completed of either parent with whom the respondent lives (whether they are biological parents or otherwise).

Government Aid - Only available in NLSY97. The variable identifies whether a respondent's parent received any form of government aid - including AFDC, SSI, Medicaid, and food aid - from the time they were 18 or their first child was born (whichever was sooner) until 1997.

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Table 2.1: Share of Population Experiencing Some Disconnection by Ages 20 & 22

		Disconnection: **S** = not working, not enrolled, not living with spouse		Disconnection: **N** = not working, not enrolled	
		Months of Disconnection at Least:			
	Sample	12 months	24 months	12 months	24 months
Percent disconnected by age 20	**All**	12.3%	3.3%	14.6%	4.6%
	Male	12.8%	3.4%	13.7%	4.0%
	Female	11.9%	3.3%	15.6%	5.3%
	Black Male	25.2%	8.7%	26.4%	10.5%
	Black Female	21.9%	6.3%	24.7%	8.2%
	Hispanic Male	14.8%	4.8%	16.4%	5.9%
	Hispanic Female	16.4%	4.7%	22.9%	7.4%
	Teen Mother (by age 18)	44.9%	16.4%	59.7%	29.2%
	Criminal (convicted by age 18)	31.4%	10.3%	33.8%	13.9%
	Dropout (by age 18)	50.7%	22.0%	59.5%	29.9%
	Foster Child (by age 18)	23.8%	7.5%	31.5%	12.8%
Percent disconnected by age 22	**All**	19.8%	8.7%	24.0%	11.0%
	Male	19.8%	8.4%	22.2%	9.7%
	Female	19.8%	9.0%	26.0%	12.4%
	Black Male	35.3%	18.5%	38.8%	21.7%
	Black Female	36.6%	20.5%	41.9%	22.6%
	Hispanic Male	25.9%	10.0%	29.1%	11.8%
	Hispanic Female	24.1%	9.2%	31.2%	16.4%
	Teen Mother (by age 18)	55.7%	35.8%	67.9%	51.3%
	Criminal (convicted by age 18)	37.0%	17.1%	42.9%	21.6%
	Dropout (by age 18)	64.6%	41.6%	75.4%	52.5%
	Foster Child (by age 18)	34.8%	16.7%	44.0%	23.9%

Table 2.2: Share of Individuals without a Disconnection Episode by Accumulative Months

		Disconnection: **S** = not working, not enrolled, not living with spouse			Disconnection: **N** = not working, not enrolled		
		Months of Disconnection at Least:					
	Sample	12months	18months	24months	12months	18months	24months
Percent disconnected by age 20	**All**	6.5%	0.7%	0.0%	5.5%	0.4%	0.0%
	Men	5.6%	1.1%	0.0%	5.6%	0.6%	0.0%
	Women	7.4%	0.3%	0.0%	5.4%	0.2%	0.0%
Percent disconnected by age 22	**All**	11.9%	1.7%	0.0%	10.6%	2.8%	0.0%
	Men	12.6%	2.0%	0.0%	11.9%	3.2%	0.0%
	Women	11.2%	1.3%	0.0%	9.4%	2.4%	0.0%

Table 2.3: Experiences of Youth with at Least Twelve Accumulated Months But with No Disconnection Episode

Characteristics of Disconnection History	Youth With 12 or More Disconnected Months by 22					
	Zero Spells			One or More Spells		
	N	S	C	N	S	C
Quarters Between 1st and Last Disconnection	13.4	12.8	12.7	14.5	14.1	13.6
Total Disconnected Months by Age 22:						
Mean	14.4	13.9	13.8	27.2	26.2	25.7
20th Percentile	12	12	12	15	15	15
50th Percentile	13	13	13	24	23	23
80th Percentile	17	15	15	38	36	35
95th Percentile	20	18	18	53	50	52
Longest Consecutive Sequence of Disconnected Months:						
Mean	6.9	6.9	6.7	21.3	20.5	20.3
20th Percentile	6	6	6	11	12	11
50th Percentile	7	7	7	18	17	16
80th Percentile	8	8	8	29	27	27
95th Percentile	8	8	8	48	42	44

Table 2.4: Probability of Experiencing a Disconnection Episode by Age for Young Men

Covariate	(1) N	(2) N	(1) S	(2) S
Black	0.7327***	0.6464***	0.7782***	0.6889***
	[0.0893]	[0.0903]	[0.0931]	[0.0941]
Hispanic	0.1094	0.1038	0.1233	0.1141
	[0.1104]	[0.1105]	[0.1175]	[0.1175]
HS Graduate, Parents	-0.6229***	-0.6042***	-0.6274***	-0.6079***
	[0.1009]	[0.1016]	[0.1058]	[0.1066]
Some College, Parents	-0.8386***	-0.7811***	-0.8865***	-0.8301***
	[0.1158]	[0.1182]	[0.1233]	[0.1257]
College Graduate, Parents	-1.2192***	-1.0844***	-1.1312***	-0.9965***
	[0.1667]	[0.1743]	[0.1702]	[0.1787]
Advanced Degree, Parents	-1.3301***	-1.2137***	-1.2715***	-1.1561***
	[0.1830]	[0.1888]	[0.1900]	[0.1967]
Received Government Aid, Parents		0.4438***		0.4468***
		[0.0867]		[0.0910]
Observations	91567	91522	91926	91881

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 2.5: Probability of Experiencing a Disconnection Episode by Age for Young Women

Covariate	(1) N	(2) N	(1) S	(2) S
Black	0.4333***	0.3067***	0.5646***	0.4522***
	[0.0860]	[0.0886]	[0.0932]	[0.0960]
Hispanic	0.2263**	0.1729*	0.2213**	0.1722
	[0.0999]	[0.1004]	[0.1124]	[0.1129]
HS Graduate, Parents	-0.4254***	-0.4067***	-0.2896***	-0.2799***
	[0.0965]	[0.0966]	[0.1054]	[0.1054]
Some College, Parents	-0.7526***	-0.6743***	-0.7329***	-0.6660***
	[0.1099]	[0.1103]	[0.1245]	[0.1248]
College Graduate, Parents	-1.6049***	-1.4057***	-1.3405***	-1.1528***
	[0.1826]	[0.1834]	[0.1930]	[0.1941]
Advanced Degree, Parents	-1.7130***	-1.4975***	-1.6877***	-1.4899***
	[0.2048]	[0.2053]	[0.2357]	[0.2353]
Received Government Aid, Parents		0.6762***		0.6263***
		[0.0824]		[0.0905]
Observations	92377	92140	93799	93546

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 2.6: Variation in Probability of Disconnection Across Different Characteristics of Young Men

S (spouse) Disconnection Definition

Disconnection By Age:	White -- HS Dropout Parent	White -- HS Dropout Parent -- Govt. Aid	White -- College Grad Parent	Black -- HS Dropout Parent -- Govt. Aid	Hispanic -- HS Dropout Parent -- Govt. Aid
15	1.0%	1.5%	0.4%	3.0%	1.7%
16	2.9%	4.5%	1.1%	8.8%	5.0%
17	5.5%	8.5%	2.1%	16.2%	9.5%
18	9.8%	14.8%	3.7%	27.2%	16.4%
19	17.0%	25.3%	6.7%	43.6%	27.8%
20	23.4%	34.0%	9.4%	55.8%	37.2%
21	28.6%	40.8%	11.8%	64.4%	44.4%
22	33.5%	46.9%	14.0%	71.2%	50.8%

Table 2.7: Variation in Probability of Disconnection Across Different Characteristics of Young Women

S (spouse) Disconnection Definition

Disconnection By Age:	White -- HS Dropout Parent	White -- HS Dropout Parent -- Govt. Aid	White -- College Grad Parent	Black -- HS Dropout Parent -- Govt. Aid	Hispanic -- HS Dropout Parent -- Govt. Aid
15	1.4%	2.6%	0.4%	4.0%	3.1%
16	2.8%	5.2%	0.9%	8.0%	6.1%
17	4.5%	8.2%	1.4%	12.5%	9.6%
18	7.4%	13.4%	2.4%	20.2%	15.7%
19	13.2%	23.2%	4.4%	33.8%	26.9%
20	18.8%	32.1%	6.4%	45.4%	36.8%
21	23.9%	39.9%	8.3%	54.8%	45.3%
22	28.8%	46.8%	10.2%	62.6%	52.6%

Table 3.1: Variation in Reconnection Rates Among Youth

Covariate	(1) N	(2) N	(3) N	(1) S	(2) S	(3) S
Male	0.0575	0.056	0.0722	-0.0612	-0.0559	-0.0366
	[0.1009]	[0.1017]	[0.1036]	[0.1076]	[0.1083]	[0.1112]
Black	-0.0302	-0.0201	-0.0464	-0.1808	-0.175	-0.2041*
	[0.1013]	[0.1024]	[0.1040]	[0.1103]	[0.1112]	[0.1127]
Hispanic	0.0254	0.0281	0.0039	-0.0906	-0.0862	-0.1062
	[0.1141]	[0.1143]	[0.1148]	[0.1289]	[0.1290]	[0.1294]
Black*Male	-0.2487*	-0.2481*	-0.2199	-0.1602	-0.1662	-0.1342
	[0.1458]	[0.1464]	[0.1483]	[0.1524]	[0.1528]	[0.1542]
Hispanic*Male	0.1353	0.135	0.1773	0.1147	0.1076	0.1445
	[0.1644]	[0.1650]	[0.1678]	[0.1767]	[0.1771]	[0.1794]
First Disconnected at Age 17	0.001	0.0047	-0.0109	0.0604	0.0499	0.0189
	[0.1119]	[0.1129]	[0.1141]	[0.1202]	[0.1208]	[0.1225]
First Disconnected at Age 18	0.0968	0.0875	0.0445	-0.0193	-0.0345	-0.1019
	[0.1017]	[0.1023]	[0.1112]	[0.1063]	[0.1067]	[0.1160]
First Disconnected at Age 19	-0.0279	-0.0426	-0.1089	-0.0623	-0.0801	-0.1779
	[0.1128]	[0.1133]	[0.1236]	[0.1176]	[0.1182]	[0.1327]
First Disconnected at Age 20	0.0341	0.0236	-0.0469	0.0967	0.0801	-0.0168
	[0.1314]	[0.1318]	[0.1431]	[0.1380]	[0.1389]	[0.1515]
First Disconnected at Age 21 or Older	0.2225	0.2121	0.1446	0.0472	0.0305	-0.0806
	[0.1370]	[0.1375]	[0.1518]	[0.1435]	[0.1439]	[0.1599]
HS Graduate, Parents	0.0233	0.0262	0.0181	-0.0515	-0.0497	-0.0576
	[0.0815]	[0.0816]	[0.0821]	[0.0855]	[0.0856]	[0.0857]
Some College, Parents	0.0789	0.0834	0.0651	0.0035	0.0067	-0.0151
	[0.0952]	[0.0953]	[0.0967]	[0.1029]	[0.1030]	[0.1048]
College Graduate, Parents	0.1096	0.1036	0.0637	0.1271	0.1255	0.101
	[0.1447]	[0.1445]	[0.1480]	[0.1499]	[0.1503]	[0.1528]
Advanced Degree, Parents	0.2058	0.2285	0.2052	0.0745	0.1193	0.1094
	[0.1798]	[0.1810]	[0.1808]	[0.1926]	[0.1945]	[0.1934]
Received Government Aid, Parents		-0.0723	-0.0575		-0.0232	-0.0039
		[0.0706]	[0.0714]		[0.0750]	[0.0761]
Gave Birth Prior to First Disconnection			0.0399			0.097
			[0.0932]			[0.1030]
Convicted of a Crime Prior to First Disconnection			-0.1536			-0.0807
			[0.1061]			[0.1111]
Dropped Out of HS Prior to First Disconnection			-0.101			-0.1385
			[0.0873]			[0.0941]
Observations	13773	13744	13744	11352	11327	11327

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3.2: Variation in Rates of Renewed Disconnection Among Youth

Covariate	(1) N	(2) N	(3) N	(1) S	(2) S	(3) S
Male	-0.0196	0.0028	0.0402	0.2198	0.2356	0.2804
	[0.1811]	[0.1795]	[0.1901]	[0.2202]	[0.2180]	[0.2291]
Black	0.097	0.067	0.1377	0.5267**	0.5169**	0.5784**
	[0.1830]	[0.1839]	[0.1871]	[0.2248]	[0.2255]	[0.2273]
Hispanic	-0.1147	-0.0929	0.0055	0.0756	0.0893	0.1892
	[0.2048]	[0.2043]	[0.2080]	[0.2556]	[0.2543]	[0.2597]
Black*Male	0.4371*	0.4329*	0.3384	0.0643	0.0492	-0.049
	[0.2497]	[0.2492]	[0.2525]	[0.2886]	[0.2871]	[0.2922]
Hispanic*Male	0.0042	-0.024	-0.114	-0.3739	-0.3893	-0.509
	[0.2909]	[0.2892]	[0.2927]	[0.3565]	[0.3543]	[0.3632]
First Disconnected at Age 17	-0.0468	-0.0865	-0.0604	-0.231	-0.2508	-0.192
	[0.1560]	[0.1568]	[0.1613]	[0.1816]	[0.1828]	[0.1877]
First Disconnected at Age 18	-0.4036**	-0.4052**	-0.0873	-0.2049	-0.2076	0.0907
	[0.1573]	[0.1578]	[0.1780]	[0.1772]	[0.1781]	[0.1953]
First Disconnected at Age 19	-0.4917**	-0.4941**	-0.1035	-0.1711	-0.172	0.2656
	[0.2059]	[0.2054]	[0.2138]	[0.2222]	[0.2221]	[0.2439]
First Disconnected at Age 20	-0.2644	-0.2502	0.0376	-0.2833	-0.2701	0.0638
	[0.3066]	[0.3069]	[0.3202]	[0.3783]	[0.3788]	[0.3779]
First Disconnected at Age 21 or Older	-3.3936***	-3.4264***	-3.0183***	-2.9612***	-2.9907***	-2.5732**
	[1.0102]	[1.0102]	[1.0233]	[1.0108]	[1.0110]	[1.0257]
HS Graduate, Parents	-0.0332	-0.0362	0.036	-0.2549	-0.2544	-0.1881
	[0.1400]	[0.1403]	[0.1431]	[0.1600]	[0.1603]	[0.1638]
Some College, Parents	-0.2497	-0.2506	-0.174	-0.5186**	-0.5202**	-0.4785**
	[0.1697]	[0.1699]	[0.1716]	[0.2037]	[0.2037]	[0.2095]
College Graduate, Parents	-0.3406	-0.2904	-0.1493	-0.1191	-0.0966	0.0235
	[0.2765]	[0.2792]	[0.2796]	[0.2817]	[0.2845]	[0.2873]
Advanced Degree, Parents	-1.2361***	-1.0814**	-0.8092*	-1.1067**	-0.9820**	-0.6905
	[0.4331]	[0.4363]	[0.4399]	[0.4738]	[0.4769]	[0.4840]
Received Government Aid, Parents		0.2386*	0.1691		0.1373	0.0512
		[0.1251]	[0.1278]		[0.1435]	[0.1476]
Gave Birth Prior to First Disconnection			0.1863			0.1953
			[0.1598]			[0.1920]
Convicted of a Crime Prior to First Disconnection			0.5094***			0.3908**
			[0.1680]			[0.1926]
Dropped Out of HS Prior to First Disconnection			0.7191***			0.7364***
			[0.1709]			[0.2041]
Gave Birth During First Disconnection			0.1822			0.1146
			[0.1563]			[0.1848]
Convicted of a Crime During First Disconnection			-0.1773			-0.1292
			[0.2121]			[0.2365]
Observations	8332	8274	8274	8185	8139	8139

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3.3
Summary of Disconnection Experiences for Youth of Different Characteristics

Group Characteristics	% All Youth	Incidence of At Least One Disconnected Spell		Characteristics of First Spell of Disconnection for Youth with At Least One Spell								Incidence of Two Spells of Disconnection		Characteristics of Re-connected Period for Youth with Two Spells					
		% at Least 1 Spell	% All Youth w/ at Least 1 Spell	Mean Age at Start of First Spell	Length of First Spell (Quarters)				Percent with First Spell Longer Than			% Two Spells	% All Youth w/ Two Spells	Length of Re-Connected Period (Quarters)				Percent with Re-Connected Period Longer Than	
					Mean	Percentiles								Mean	Percentiles				
						20	50	80	1 Year	2 Years	3 Years				20	50	80	1 Year	2 Years
All Youth	100.0%	29.2%	100.0%	19.0	5.9	3	5	8	72.8%	26.2%	7.0%	6.0%	100.0%	6.8	3	6	10	70.1%	35.3%
Male	51.3%	29.3%	51.4%	18.9	6.1	3	6	8	73.7%	27.9%	7.9%	6.5%	55.6%	6.6	2	5	10	68.0%	34.5%
Female	48.7%	29.1%	48.6%	19.0	5.7	3	5	8	71.9%	24.5%	6.1%	5.5%	44.4%	7.0	3	6	10	72.7%	36.4%
Race:																			
White and Other	71.8%	23.7%	58.3%	19.1	5.6	3	5	8	71.1%	23.5%	5.7%	4.1%	49.7%	6.9	3	6	10	71.3%	36.4%
Male	36.6%	23.9%	29.9%	19.0	5.8	3	5	8	71.5%	25.1%	6.5%	4.5%	27.7%	6.8	3	6	10	69.9%	36.1%
Female	35.2%	23.5%	28.4%	19.1	5.5	3	5	8	70.8%	21.9%	4.9%	3.7%	21.9%	7.0	3	6	10	73.1%	36.9%
Black	15.4%	49.2%	25.9%	18.8	6.6	3	6	9	77.0%	32.9%	10.4%	13.9%	35.6%	6.4	2	5	10	67.5%	32.8%
Male	7.8%	50.5%	13.5%	18.7	7.0	3	6	10	79.6%	36.2%	12.3%	15.7%	20.5%	6.1	2	5	10	64.5%	31.9%
Female	7.5%	47.8%	12.3%	18.9	6.2	3	6	9	74.1%	29.2%	8.3%	12.0%	15.1%	6.8	3	6	10	71.6%	34.1%
Hispanic	12.8%	36.2%	15.8%	18.9	5.8	3	5	8	72.1%	25.5%	6.3%	6.9%	14.7%	7.2	3	6	11	72.1%	37.8%
Male	6.9%	34.0%	8.0%	18.9	5.7	3	5	8	71.8%	24.8%	5.6%	6.4%	7.3%	6.9	2	6	10	70.3%	35.6%
Female	5.9%	38.7%	7.9%	18.9	5.9	3	5	8	72.3%	26.3%	7.1%	7.4%	7.4%	7.5	3	6	11	74.0%	39.9%
Parent's Education:																			
HS Dropout	17.2%	50.8%	30.0%	18.8	6.2	3	6	9	74.6%	28.0%	7.9%	13.4%	38.6%	6.6	2	6	10	69.8%	35.5%
Male	9.0%	51.7%	15.9%	18.7	6.4	3	6	9	75.7%	30.4%	9.1%	14.6%	21.9%	6.4	2	5	9	67.5%	33.6%
Female	8.3%	49.8%	14.1%	18.9	5.9	3	5	8	73.5%	25.2%	6.6%	12.1%	16.7%	6.9	3	6	10	72.9%	38.1%
HS Graduate	28.0%	35.0%	33.5%	19.0	6.1	3	6	8	73.6%	27.8%	7.7%	7.0%	32.6%	6.8	3	6	10	70.2%	34.8%
Male	14.4%	32.3%	16.0%	19.0	6.2	3	6	9	73.8%	29.1%	8.6%	7.0%	16.9%	6.8	2	6	10	68.4%	35.9%
Female	13.5%	37.9%	17.5%	19.0	6.0	3	5	8	73.4%	26.5%	6.9%	6.9%	15.7%	6.9	3	6	10	72.0%	33.6%
Some College	25.3%	24.6%	21.3%	19.1	5.7	3	5	8	70.9%	24.8%	5.9%	3.9%	16.3%	7.1	3	6	11	71.0%	37.7%
Male	12.7%	23.9%	10.4%	19.0	5.9	3	5	8	71.6%	26.1%	6.8%	4.1%	8.8%	6.7	2	5	11	67.0%	35.1%
Female	12.6%	25.3%	10.9%	19.2	5.6	3	5	8	70.4%	23.5%	5.2%	3.6%	7.5%	7.5	3	6	12	75.6%	40.8%
College Graduate	15.3%	16.9%	8.9%	19.1	5.5	3	5	8	71.1%	21.0%	5.5%	3.8%	9.8%	6.5	2	5	10	68.0%	30.6%
Male	7.7%	19.4%	5.1%	19.0	5.8	3	5	8	73.3%	23.9%	6.2%	4.9%	6.3%	6.3	2	5	10	68.6%	31.4%
Female	7.7%	14.4%	3.8%	19.2	5.1	2	5	7	68.1%	17.2%	4.5%	2.8%	3.6%	6.7	2	5	10	67.0%	29.2%
Advanced	14.2%	13.3%	6.5%	19.2	5.5	2	5	8	68.8%	22.5%	5.0%	1.2%	2.7%	7.2	3	7	10	74.8%	41.5%
Male	7.5%	16.2%	4.1%	19.1	5.7	3	5	8	71.3%	23.5%	5.4%	1.4%	1.8%	6.9	2	6	10	71.9%	38.8%
Female	6.7%	10.1%	2.3%	19.3	5.1	2	5	8	64.3%	20.6%	4.2%	0.9%	1.0%	7.6	5	7	11	80.2%	46.5%

Table 4.1: Variation in Disconnection Rates Among Young Men in the 1980s

Covariate	N	S
Black	0.4146***	0.4549***
	[0.0923]	[0.0941]
Hispanic	0.0381	0.0402
	[0.1124]	[0.1161]
HS Graduate, Parents	-0.6259***	-0.6191***
	[0.1031]	[0.1051]
Some College, Parents	-0.6282***	-0.6816***
	[0.1479]	[0.1548]
College Graduate, Parents	-1.3574***	-1.4397***
	[0.2039]	[0.2162]
Advanced Degree, Parents	-1.6900***	-1.7558***
	[0.2713]	[0.2894]
Observations	48784	49261

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.2: Variation in Disconnection Rates Among Young Women in the 1980s

Covariate	N	S
Black	0.5743***	1.0200***
	[0.0868]	[0.1045]
Hispanic	0.2146**	0.4786***
	[0.1049]	[0.1258]
HS Graduate, Parents	-0.4292***	-0.4399***
	[0.0957]	[0.1122]
Some College, Parents	-0.7587***	-0.7510***
	[0.1490]	[0.1800]
College Graduate, Parents	-1.7319***	-1.4095***
	[0.2345]	[0.2670]
Advanced Degree, Parents	-1.5751***	-1.1549***
	[0.2776]	[0.3036]
Observations	44181	47433

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.3: Variation in Reconnection Rates Among Youth in the 1980s

Covariate	(1) N	(2) N	(1) S	(2) S
Male	0.002	0.0189	-0.1006	-0.1099
	[0.0859]	[0.0871]	[0.1028]	[0.1036]
Black	-0.3031***	-0.3231***	-0.5237***	-0.5220***
	[0.0848]	[0.0863]	[0.1011]	[0.1033]
Hispanic	-0.1721*	-0.1777*	-0.1615	-0.1573
	[0.0997]	[0.1000]	[0.1207]	[0.1210]
Black*Male	0.3616***	0.3691***	0.4882***	0.4986***
	[0.1195]	[0.1197]	[0.1332]	[0.1348]
Hispanic*Male	0.2634*	0.2560*	0.2043	0.2171
	[0.1449]	[0.1454]	[0.1691]	[0.1700]
First Disconnected at Age 17	-0.1028	-0.1121	-0.0809	-0.0913
	[0.1258]	[0.1264]	[0.1342]	[0.1361]
First Disconnected at Age 18	-0.1092	-0.1155	-0.1428	-0.1994
	[0.1113]	[0.1206]	[0.1157]	[0.1305]
First Disconnected at Age 19	-0.0909	-0.097	-0.1056	-0.1575
	[0.1185]	[0.1290]	[0.1230]	[0.1336]
First Disconnected at Age 20	0.0386	0.0333	0.1118	0.0662
	[0.1345]	[0.1426]	[0.1481]	[0.1548]
First Disconnected at Age 21 or Older	0.1505	0.1308	0.2352**	0.2040*
	[0.1027]	[0.1059]	[0.1112]	[0.1149]
HS Graduate, Parents	0.1819***	0.1771**	0.1865**	0.1780**
	[0.0698]	[0.0701]	[0.0770]	[0.0771]
Some College, Parents	-0.022	-0.0269	0.0098	-0.0123
	[0.1068]	[0.1091]	[0.1224]	[0.1248]
College Graduate, Parents	0.4622***	0.4665***	0.5698***	0.5463***
	[0.1461]	[0.1470]	[0.1807]	[0.1823]
Advanced Degree, Parents	0.3748**	0.3785**	0.2582	0.234
	[0.1782]	[0.1796]	[0.2097]	[0.2118]
Gave Birth Prior to First Disconnection		0.1251		-0.0235
		[0.0850]		[0.1025]
Dropped Out of HS Prior to First Disconnection		-0.0091		-0.0834
		[0.0731]		[0.0847]
Observations	21608	21608	15498	15498

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.4: Variation in Experiencing a Renewed Disconnection Episode in the 1980s

Covariate	(1) N	(2) N	(1) S	(2) S
Male	-0.5967***	-0.6025***	-0.166	-0.1282
	[0.1261]	[0.1288]	[0.1597]	[0.1595]
Black	-0.0569	-0.0359	0.3728**	0.3429**
	[0.1138]	[0.1156]	[0.1519]	[0.1648]
Hispanic	0.0543	0.0144	0.2499	0.223
	[0.1303]	[0.1307]	[0.1751]	[0.1754]
Black*Male	0.5104***	0.4622***	0.2506	0.2378
	[0.1697]	[0.1713]	[0.2022]	[0.2124]
Hispanic*Male	0.1736	0.1437	-0.0341	-0.0732
	[0.1981]	[0.1991]	[0.2394]	[0.2417]
First Disconnected at Age 17	-0.1765	-0.0763	-0.3204*	-0.2627
	[0.1558]	[0.1583]	[0.1744]	[0.1793]
First Disconnected at Age 18	-0.2183	0.0975	-0.2962*	0.0213
	[0.1369]	[0.1481]	[0.1585]	[0.1723]
First Disconnected at Age 19	-0.3259**	0.0005	-0.5974***	-0.3
	[0.1539]	[0.1604]	[0.1771]	[0.1841]
First Disconnected at Age 20	-0.4685**	-0.1336	-0.5545**	-0.237
	[0.1865]	[0.1949]	[0.2281]	[0.2439]
First Disconnected at Age 21 or Older	-0.4191***	-0.1823	-0.3867**	-0.2213
	[0.1377]	[0.1441]	[0.1595]	[0.1632]
HS Graduate, Parents	-0.1674*	-0.106	-0.1579	-0.0917
	[0.0969]	[0.0978]	[0.1129]	[0.1132]
Some College, Parents	-0.4540***	-0.3735**	-0.5475***	-0.4470**
	[0.1689]	[0.1703]	[0.2077]	[0.2086]
College Graduate, Parents	-0.6307**	-0.5162**	-0.5141*	-0.3821
	[0.2534]	[0.2515]	[0.3055]	[0.3025]
Advanced Degree, Parents	-0.2856	-0.1599	-0.2511	-0.1108
	[0.2772]	[0.2790]	[0.3406]	[0.3400]
Gave Birth Prior to First Disconnection		-0.1384		0.0163
		[0.1298]		[0.1537]
Dropped Out of HS Prior to First Disconnection		0.5374***		0.5484***
		[0.1016]		[0.1265]
Gave Birth During First Disconnection		0.1183		0.228
		[0.1046]		[0.1434]
Observations	25982	25982	27497	27497

Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 6.1: Percent of Youth Having Contact with Government Programs by Disconnection Status

	Ever Disconnected by Definition:			Never Disconnected by Definition:		
Type of contact	N	S	C	N	S	C
Govt. Training	17.8%	17.6%	17.8%	10.6%	11.0%	11.1%
AFDC	8.4%	7.9%	8.1%	1.3%	1.8%	1.9%
Food Stamps	23.2%	21.3%	19.6%	4.5%	6.0%	6.9%
Other Welfare	8.3%	8.0%	8.3%	2.0%	2.4%	2.5%
WIC	32.3%	28.2%	23.6%	8.7%	11.1%	12.8%
Work. Comp	0.4%	0.5%	0.5%	0.2%	0.2%	0.2%
Unemp. Ins.	9.7%	9.0%	9.4%	4.9%	5.4%	5.4%
Arrest	39.5%	39.6%	40.6%	19.7%	20.7%	20.9%
Found Guilty	42.8%	43.5%	45.9%	13.4%	14.7%	14.8%
Charged	30.7%	30.7%	32.0%	14.3%	15.2%	15.3%
Any Welfare	46.0%	42.2%	38.6%	15.4%	18.1%	19.6%

Table 6.2: Timing Contact with Government Programs by Disconnected Youth

	Prior to First Disconnection			During 1st Disconnection Spell			During/After 1st Disconnection Spell		
Type of contact	N	S	C	N	S	C	N	S	C
Govt. Training	7.7%	7.2%	7.0%	7.4%	7.5%	7.9%	11.5%	11.8%	12.2%
AFDC	2.0%	2.2%	2.4%	5.1%	4.5%	4.8%	8.0%	7.3%	7.4%
Food Stamps	5.9%	5.8%	5.0%	14.9%	12.0%	10.0%	22.3%	20.4%	18.7%
Other Welfare	4.0%	4.0%	4.3%	4.9%	4.4%	4.7%	6.4%	6.4%	6.7%
WIC	14.4%	13.0%	9.2%	23.7%	18.1%	13.5%	30.1%	26.3%	22.0%
Work. Comp	0.4%	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unemp. Ins.	2.7%	2.6%	2.8%	5.4%	4.7%	4.8%	8.7%	7.9%	8.2%
Arrest	29.5%	29.4%	29.5%	35.2%	34.8%	35.5%	39.5%	39.6%	40.6%
Found Guilty	23.0%	22.6%	23.2%	34.3%	33.7%	35.4%	42.8%	43.5%	45.9%
Charged	20.8%	20.4%	20.8%	26.0%	25.7%	26.5%	30.7%	30.7%	32.0%
Any Welfare	21.0%	19.9%	16.5%	34.1%	28.3%	24.0%	43.2%	39.5%	35.8%

Figure 2.1: Rates of Disconnection for Young Men by Age

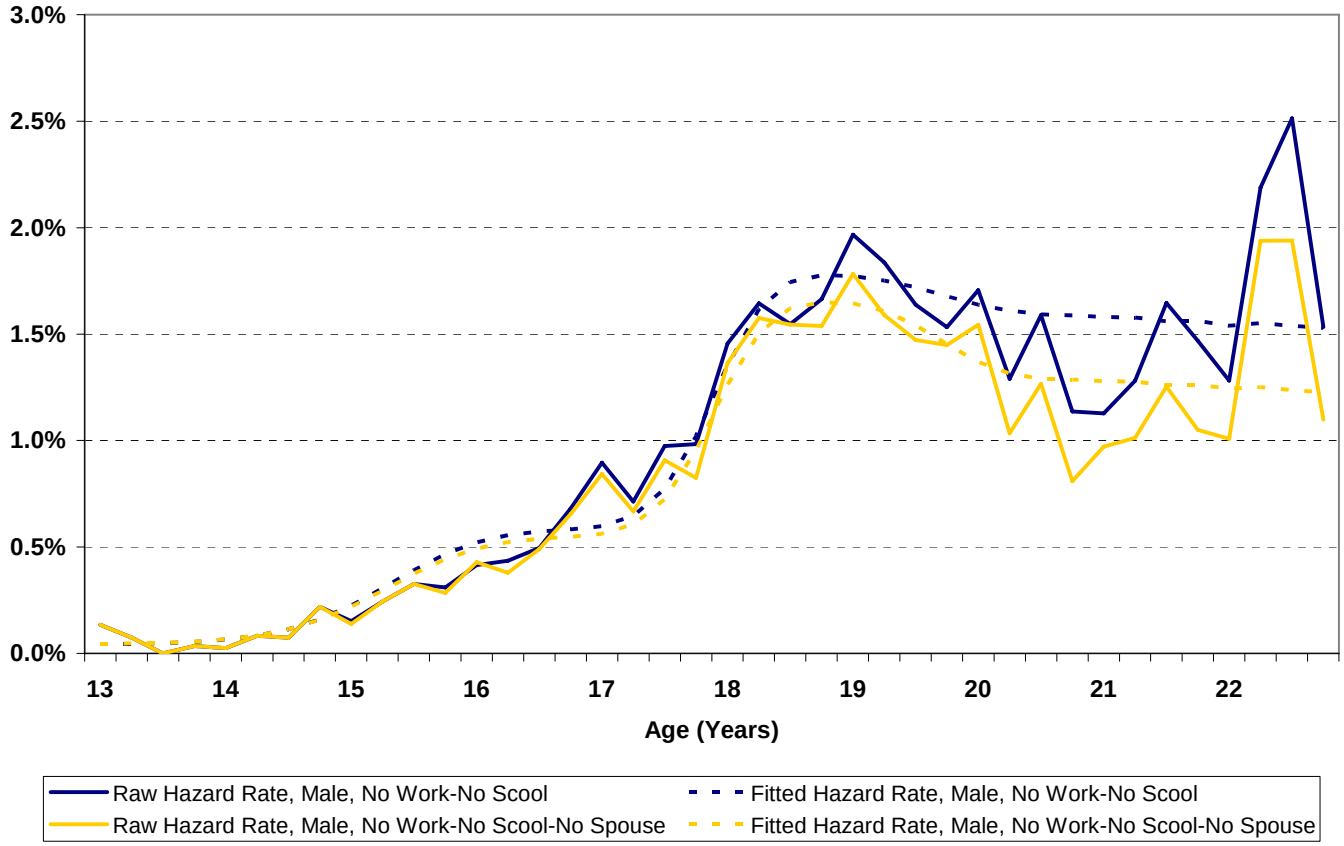

Figure 2.2: Rates of Disconnection for Young Women by Age

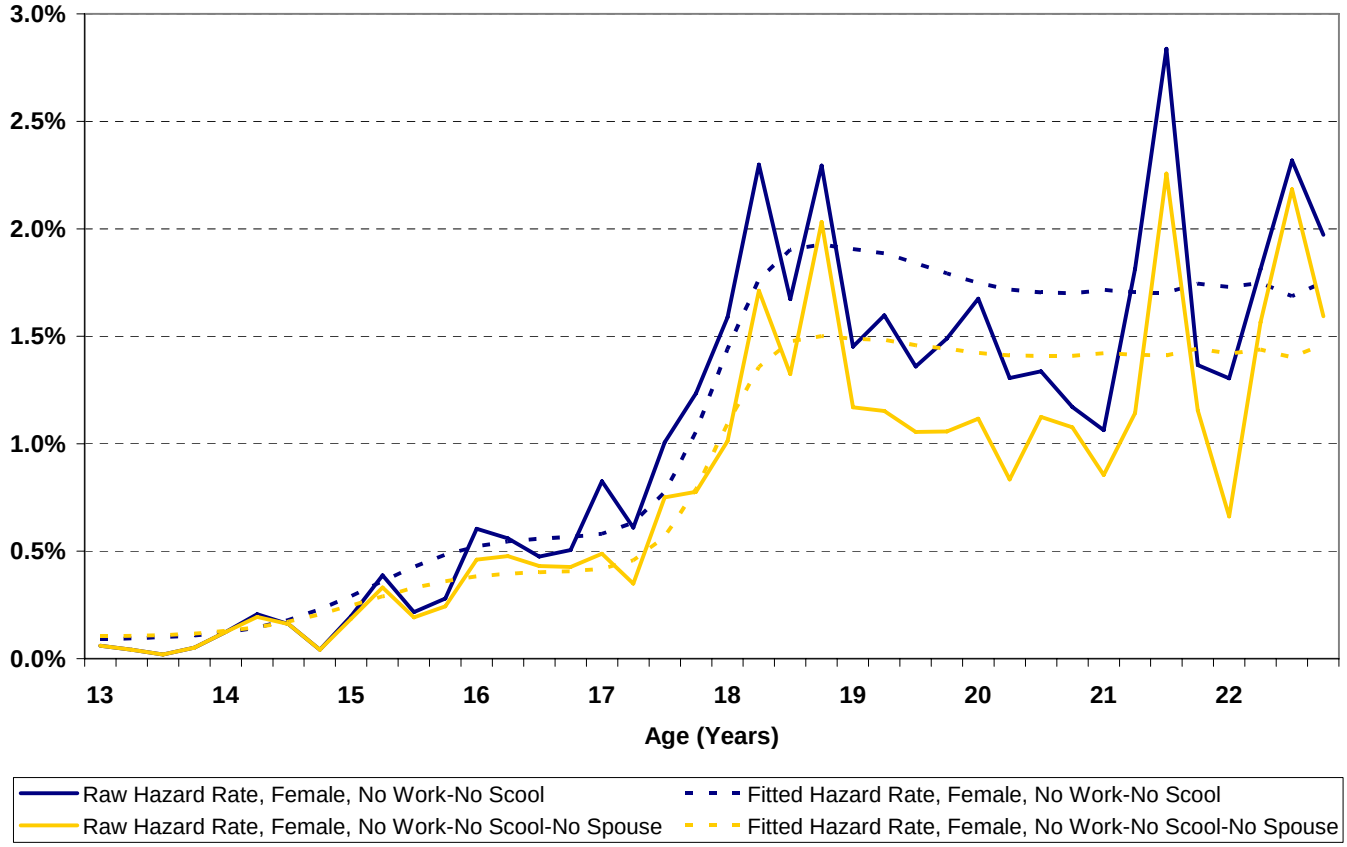

Figure 2.3: Probability of Experiencing a Disconnection Episode by Age

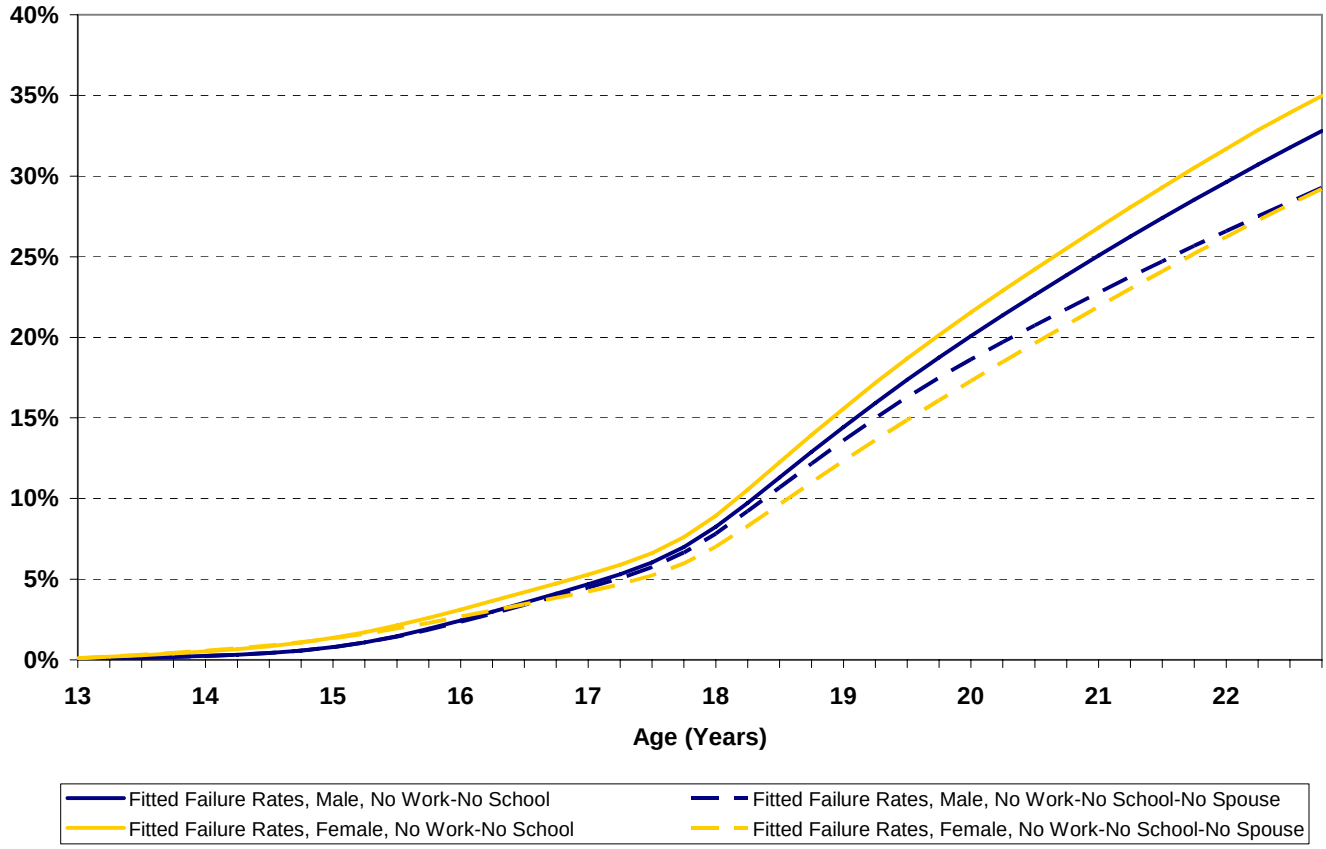

Figure 2.4: Probability of Experiencing a Disconnection Episode by Age for Young Men

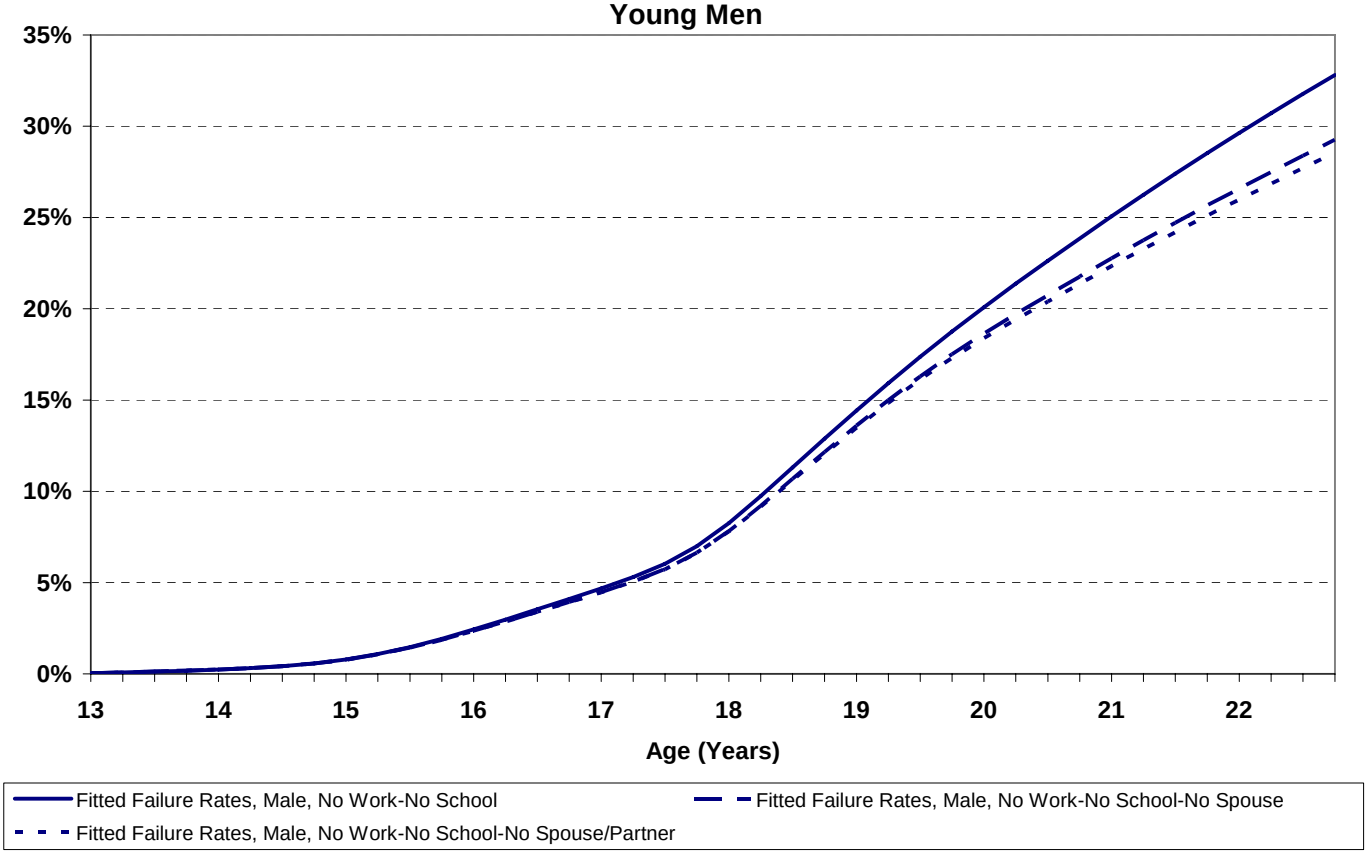

Figure 2.5: Probability of Experiencing a Disconnection Episode by Age for Young Women

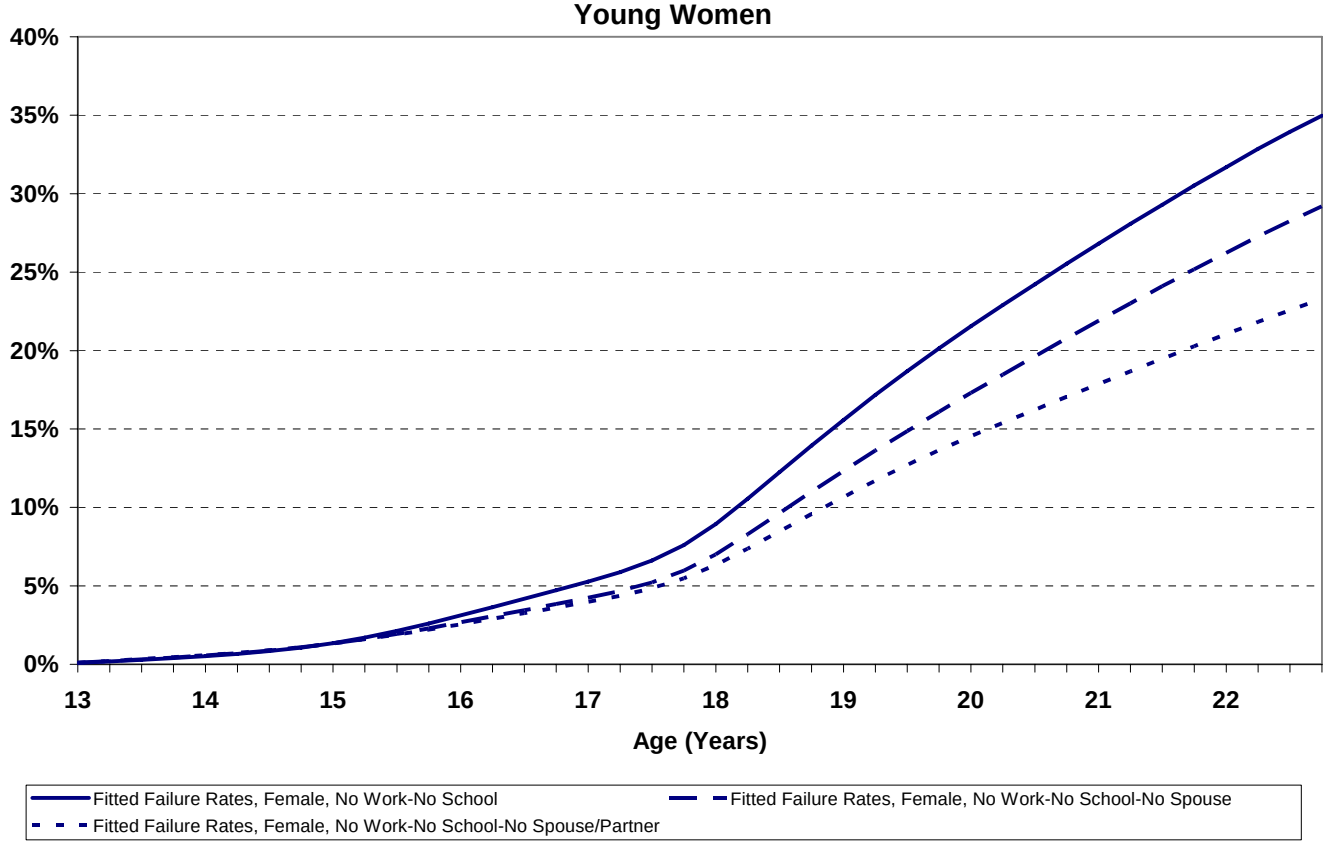

Figure 3.1: Rates of Reconnection

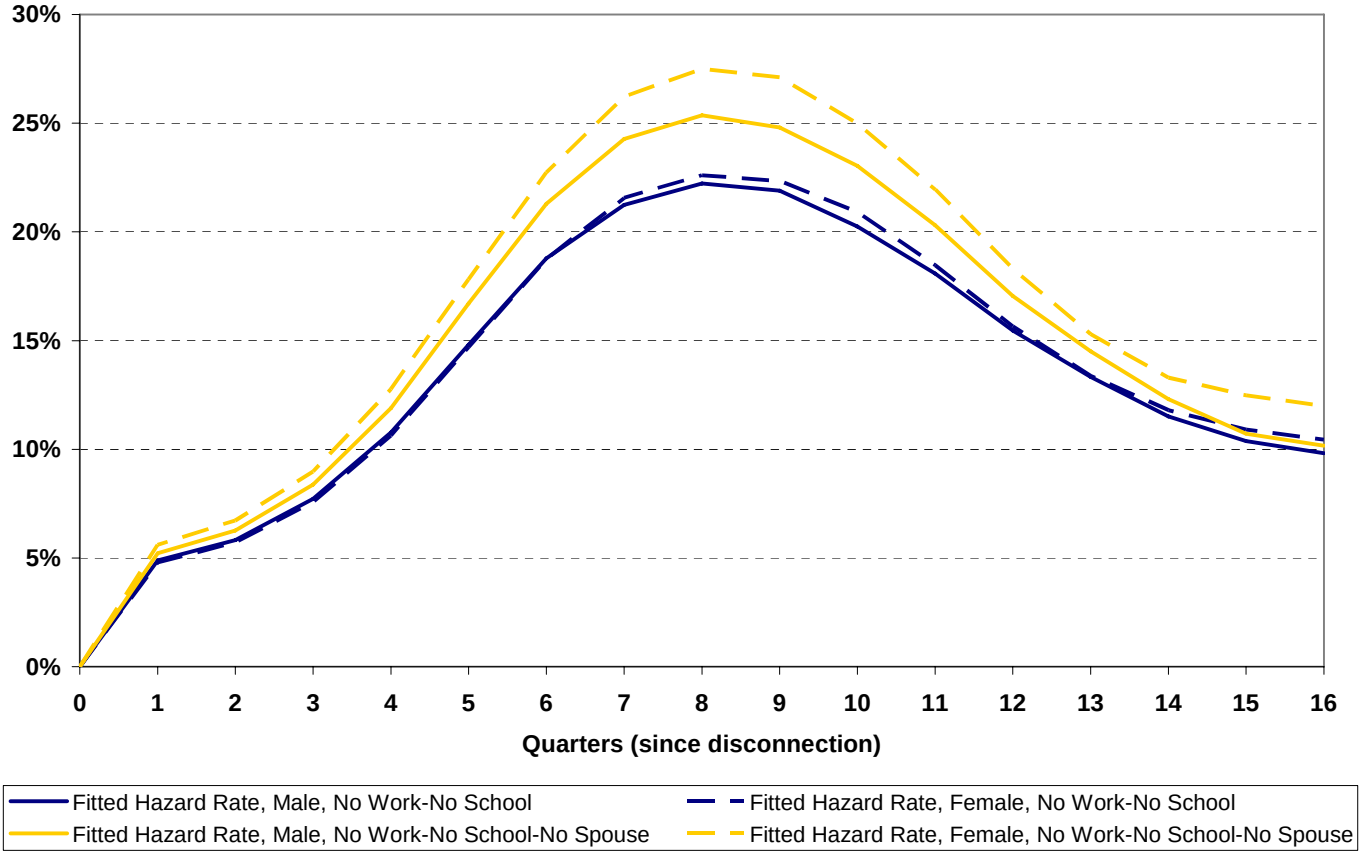

Figure 3.2: Probability of Experiencing a Reconnection Episode

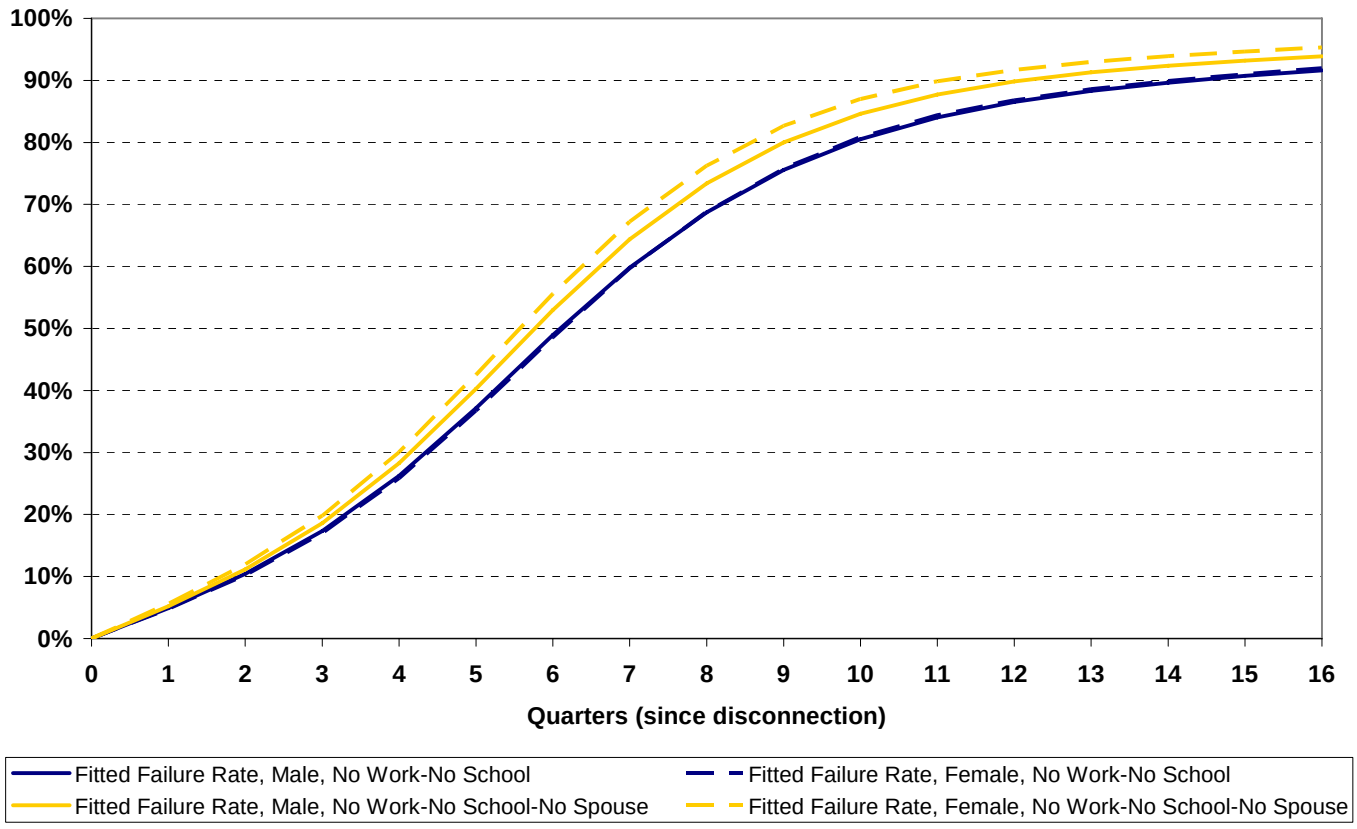

Figure 3.3: Probability of Experiencing a Renewed Disconnection Episode

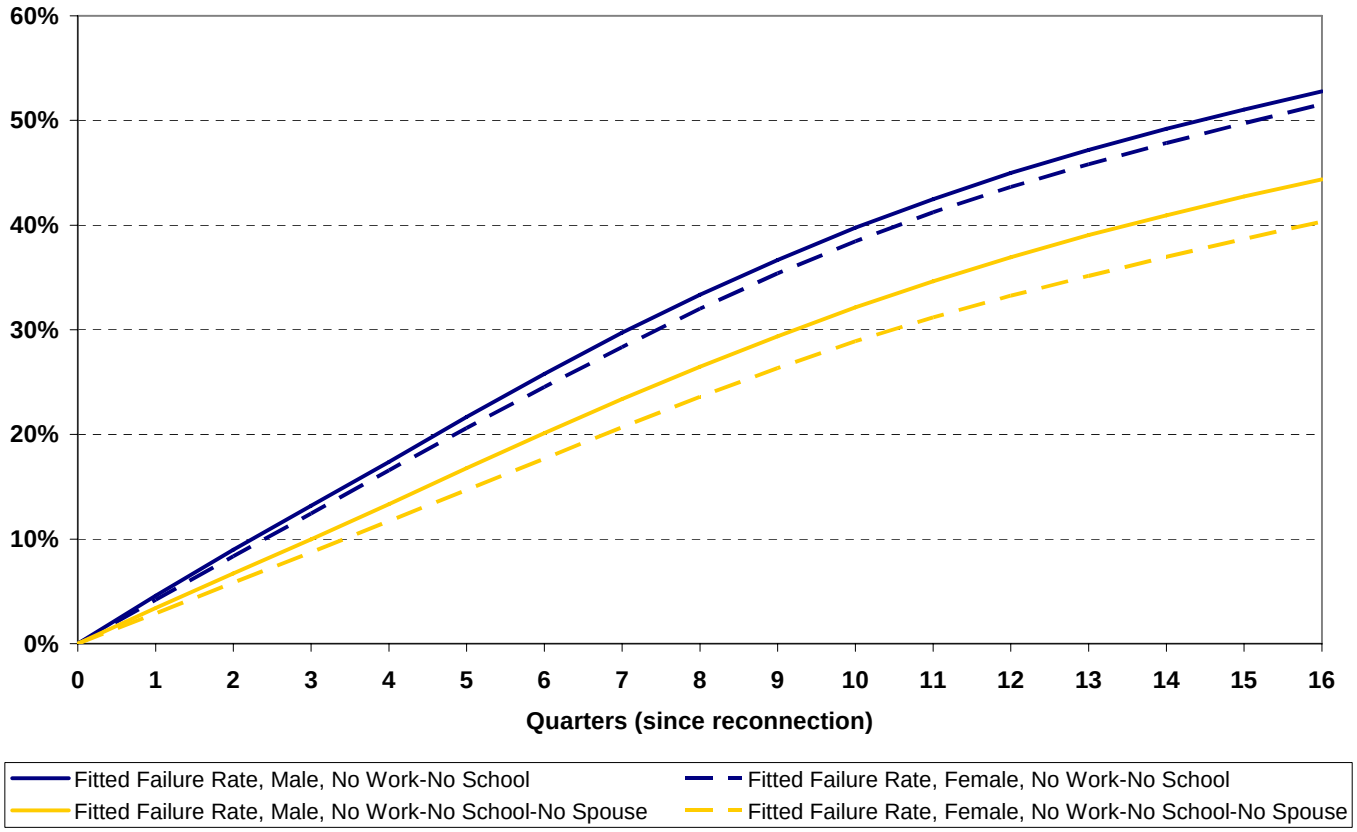

Figure 4.1: Comparisons of Disconnection Rates for Young Men in the 1980s and 1990s

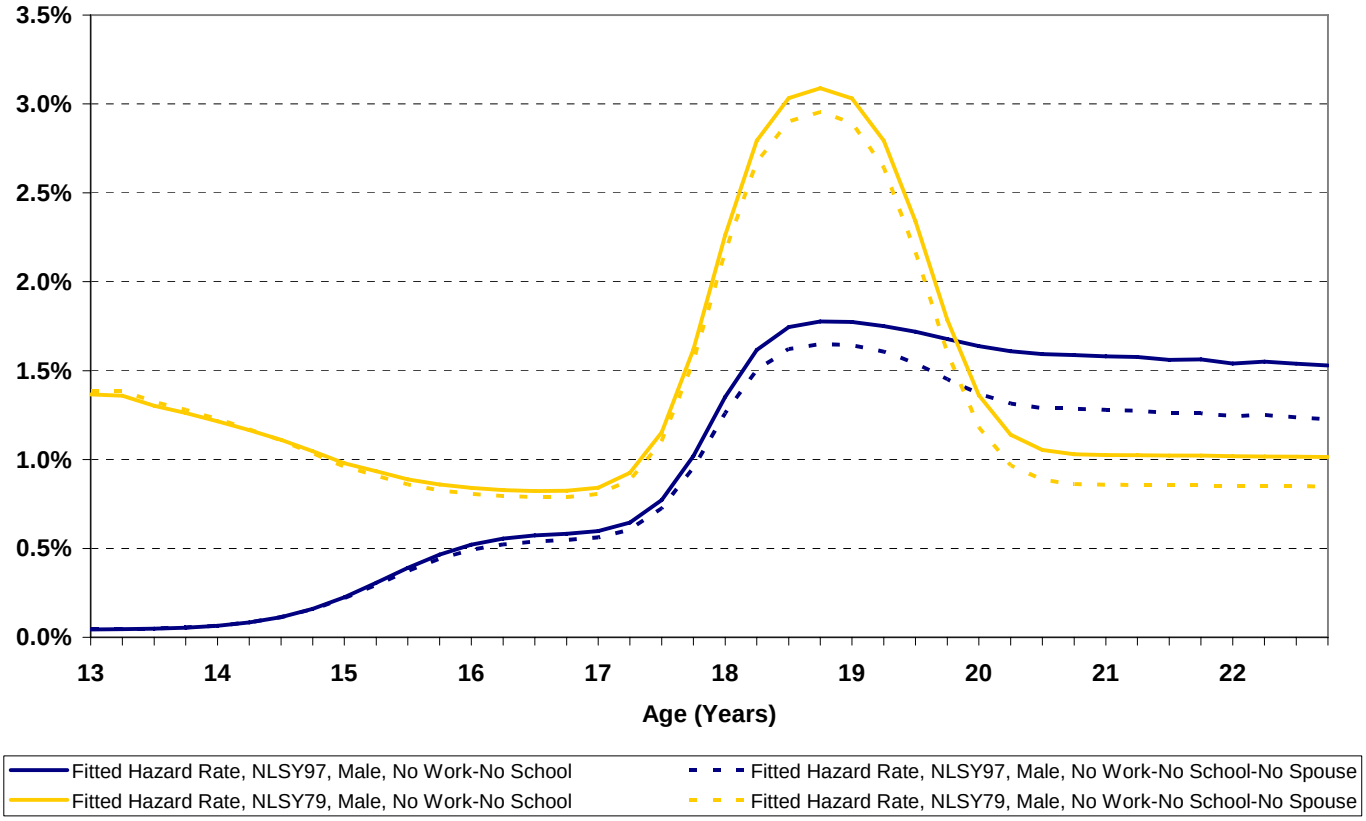

Figure 4.2: Comparisons of Disconnection Rates for Young Women in the 1980s and 1990s

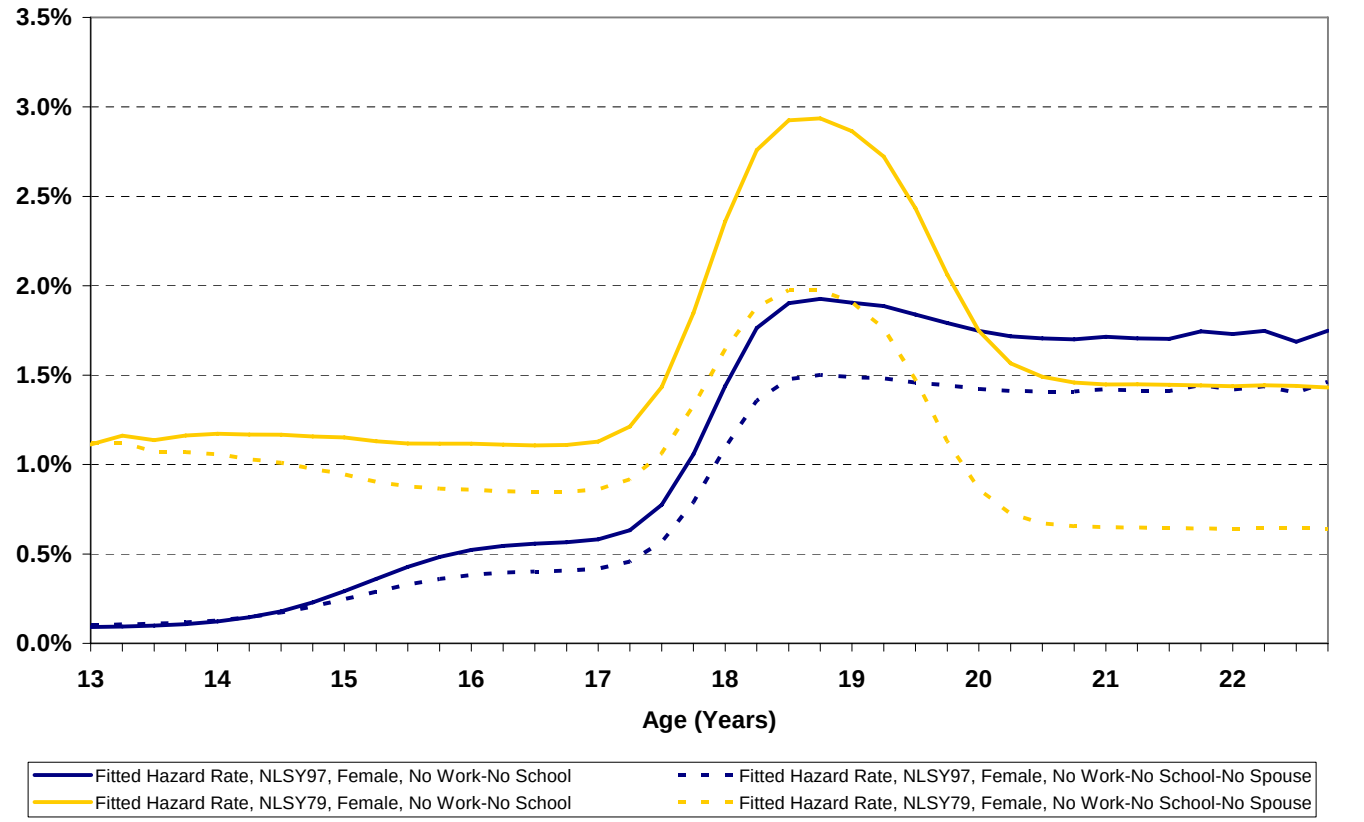

Figure 4.3: Shares of Young Men Experiencing Some Disconnection by Age in the 1980s and 1990s

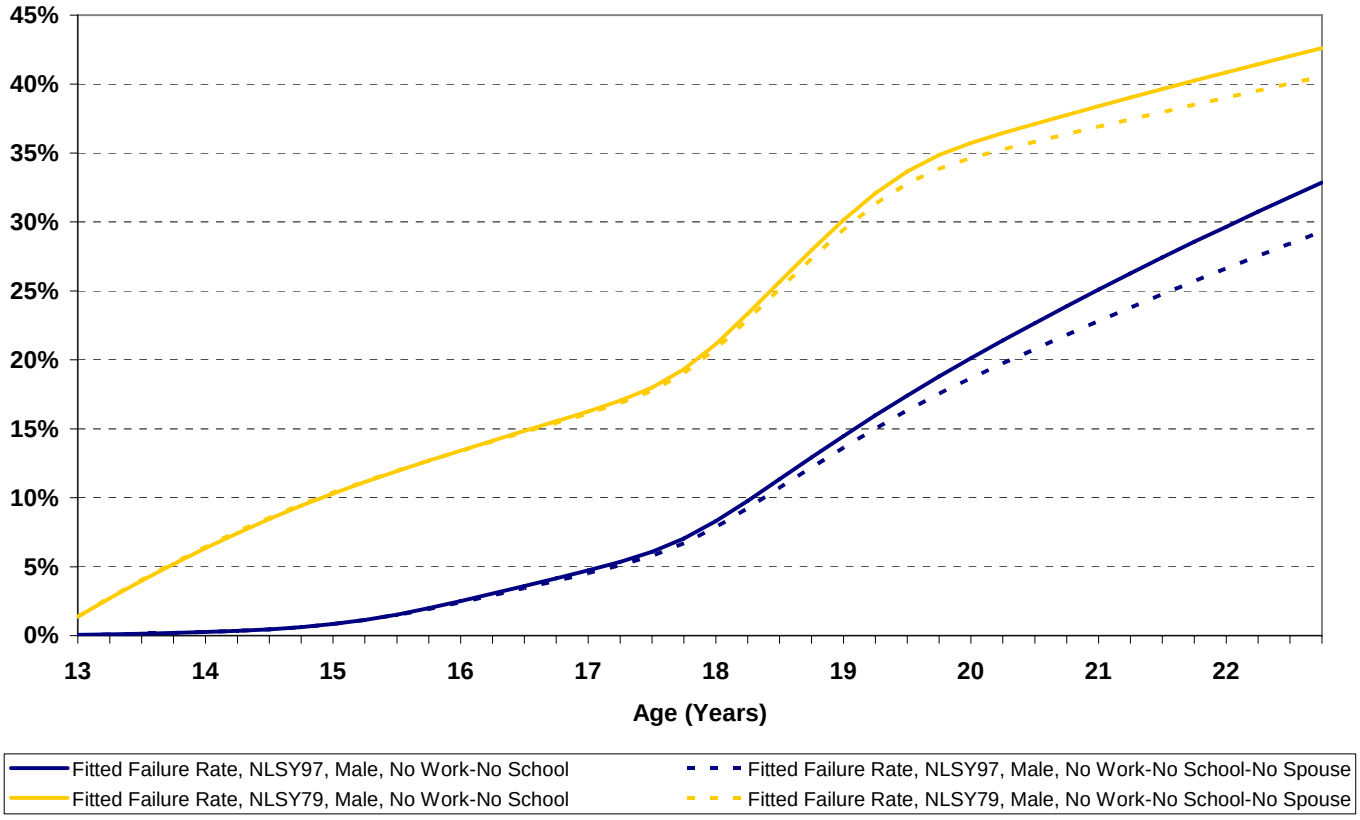

Figure 4.4: Shares of Young Women Experiencing Some Disconnection by Age in the 1980s and 1990s

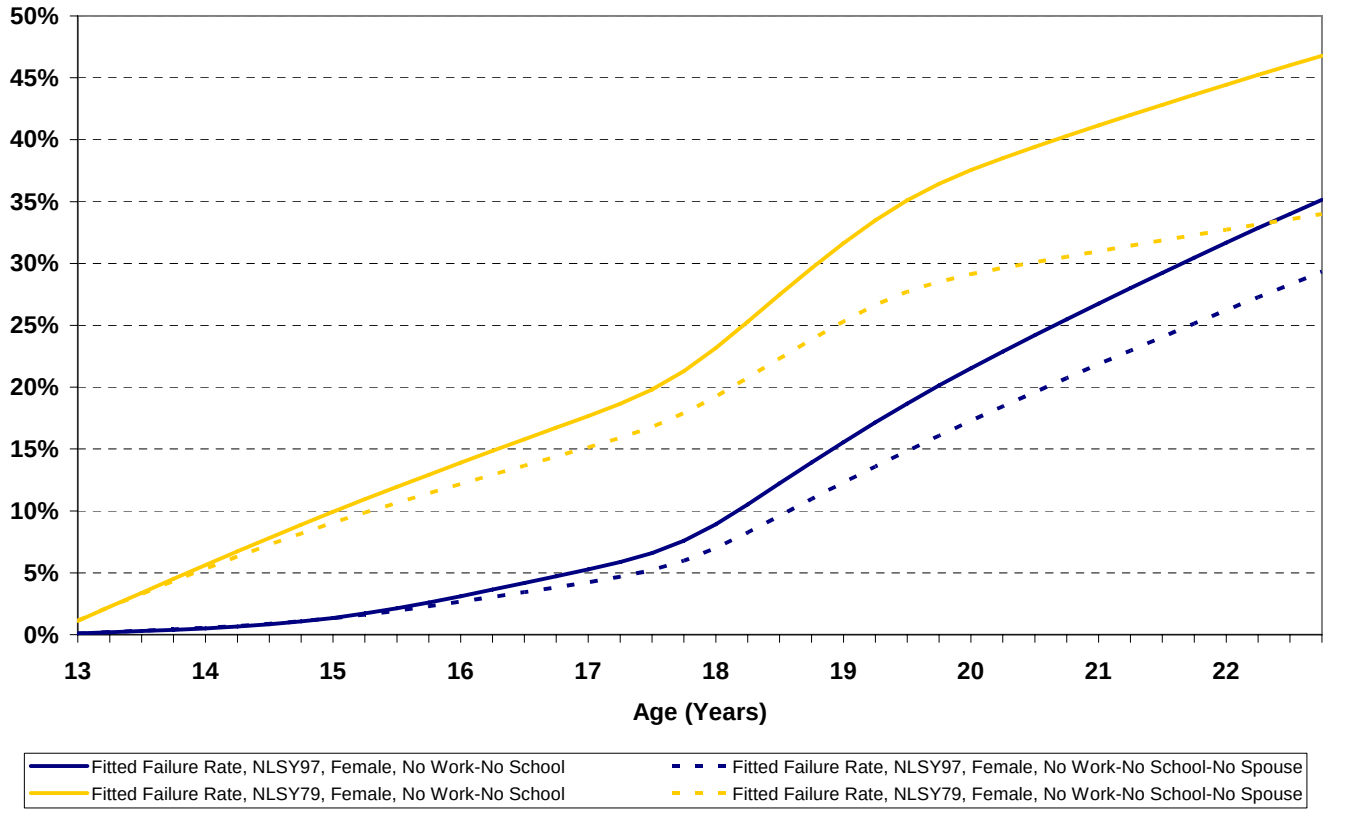

Figure 4.5: Comparison of Reconnection Probabilities for Young Men in the 1980s and 1990s

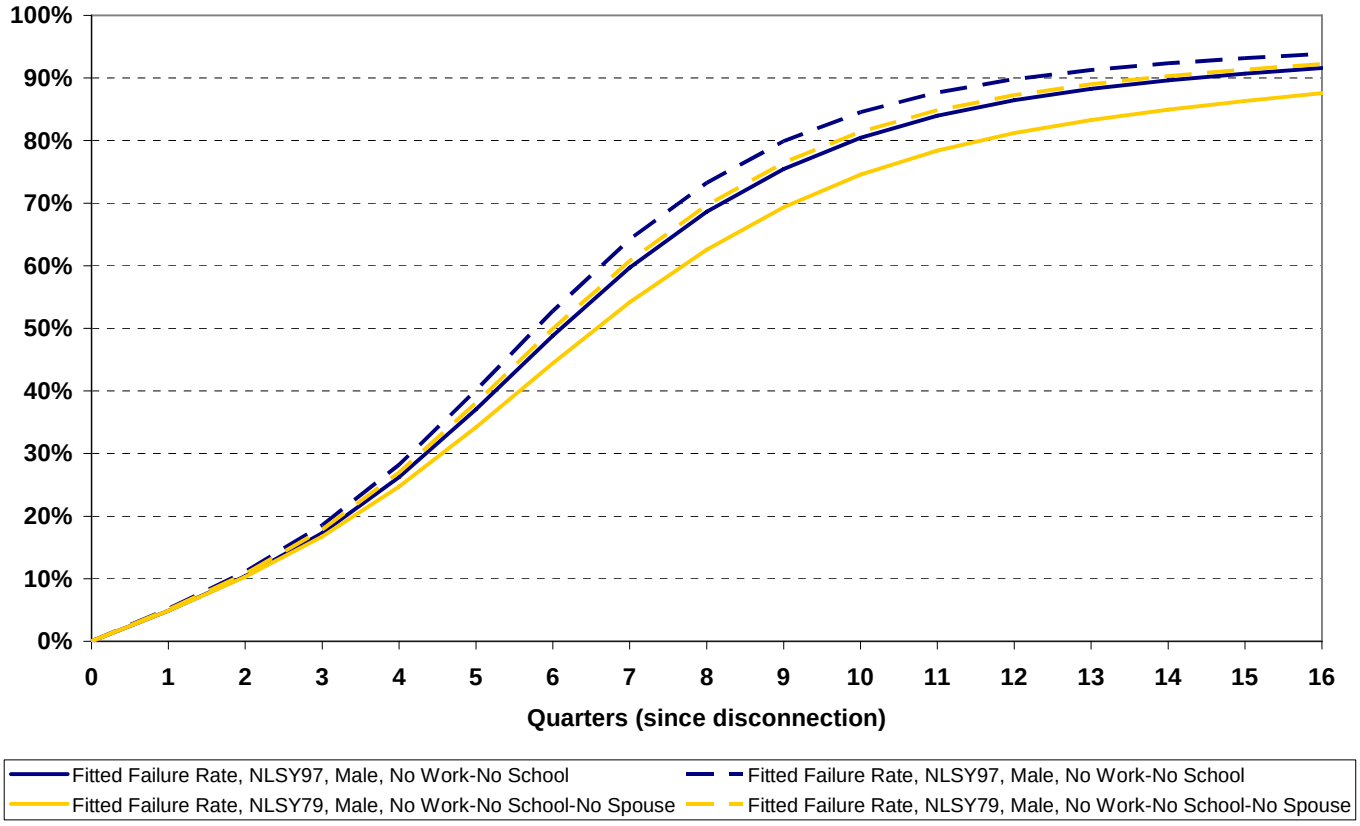

Figure 4.6: Comparison of Reconnection Probabilities for Young Women in the 1980s and 1990s

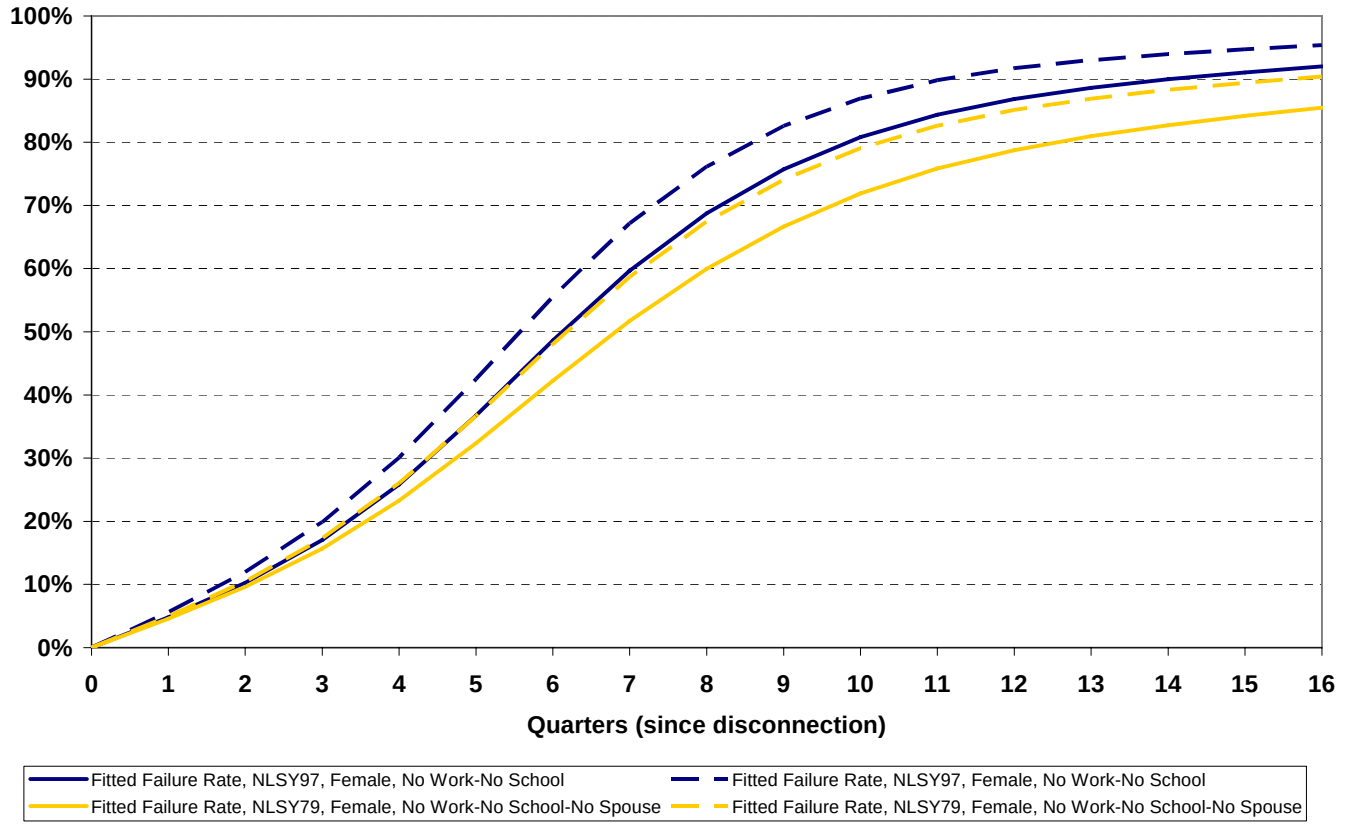

Figure 4.7: Comparison of Renewed Disconnection Probabilities for Young Men in the 1980s and 1990s

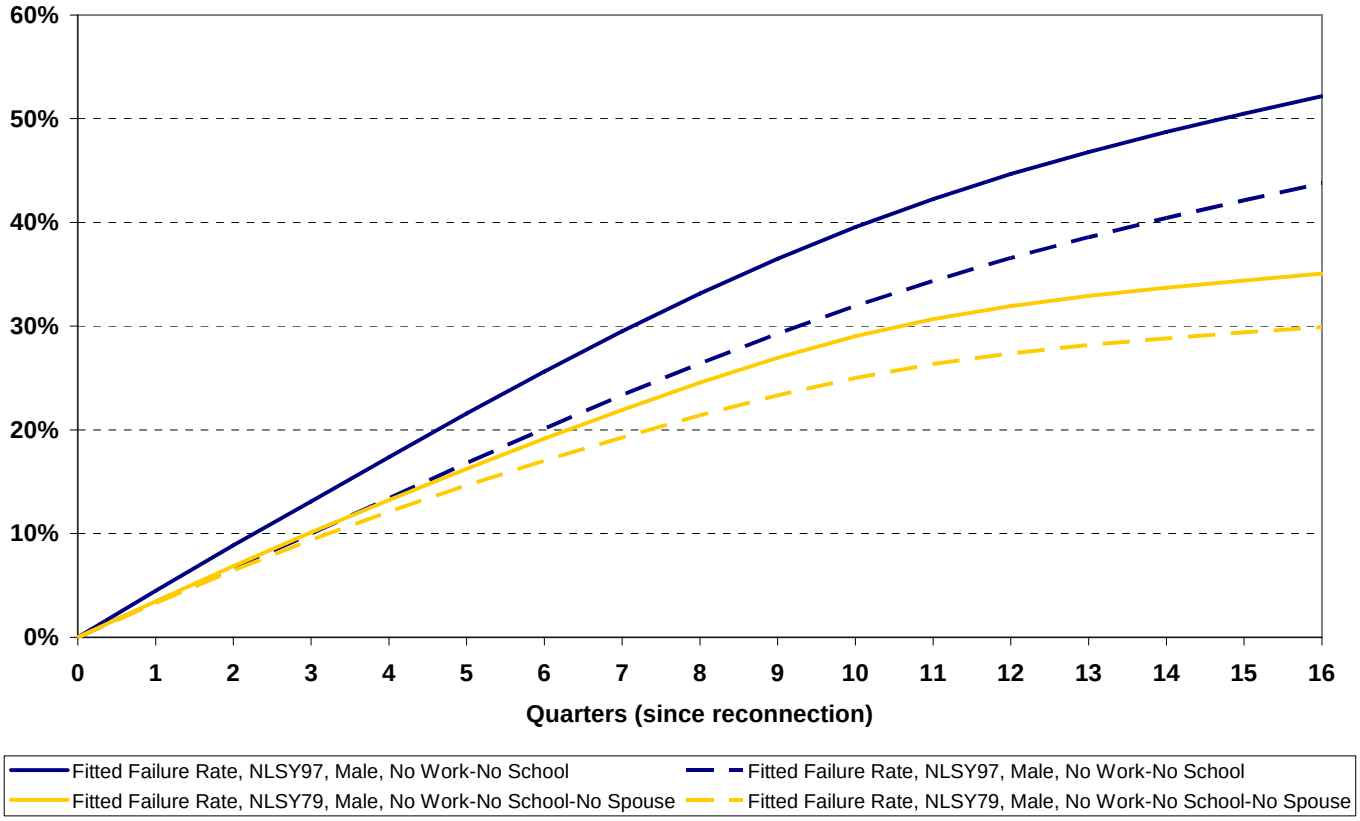

Figure 4.8: Comparison of Renewed Disconnection Probabilities for Young Women in the 1980s and 1990s

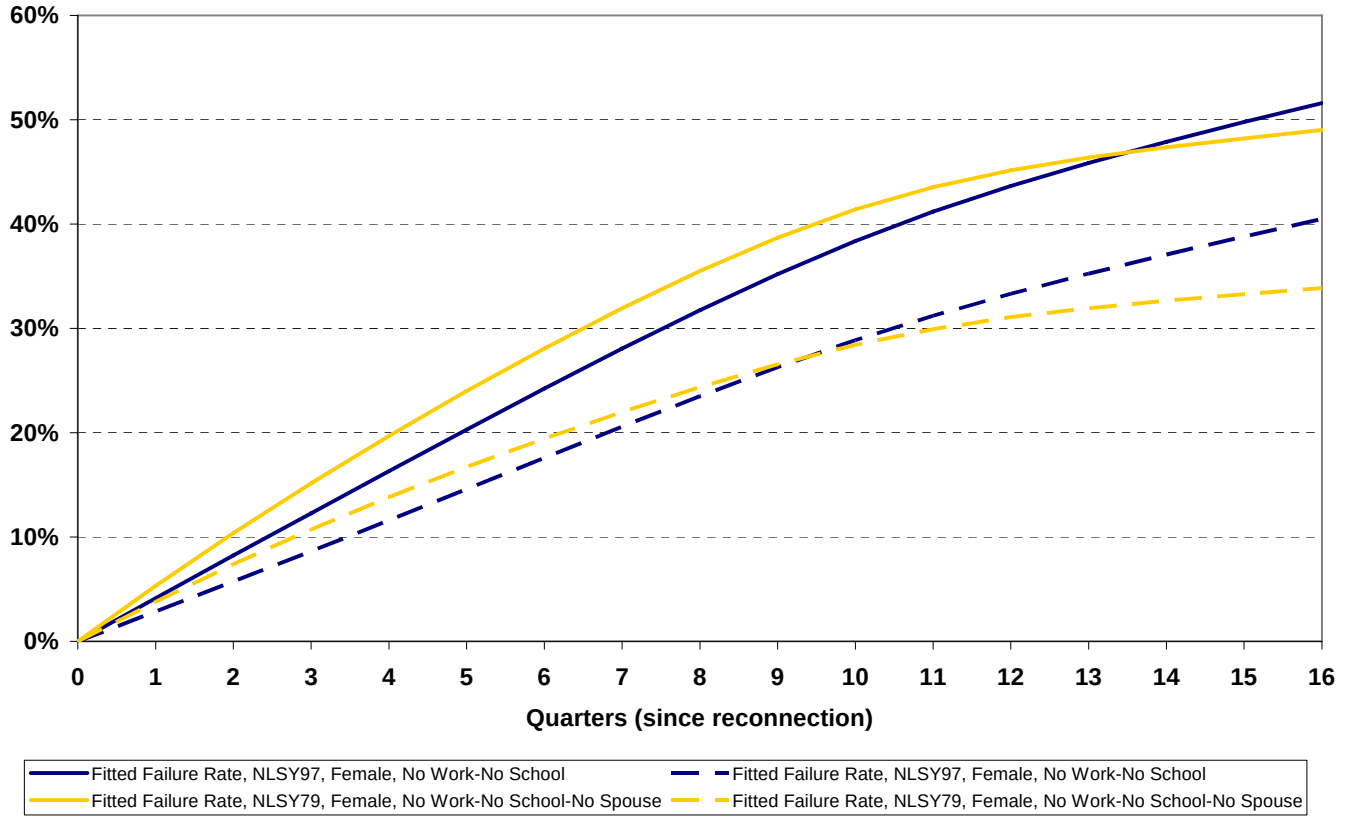

Figure 5.1: Probability of Dropping out of School by Age

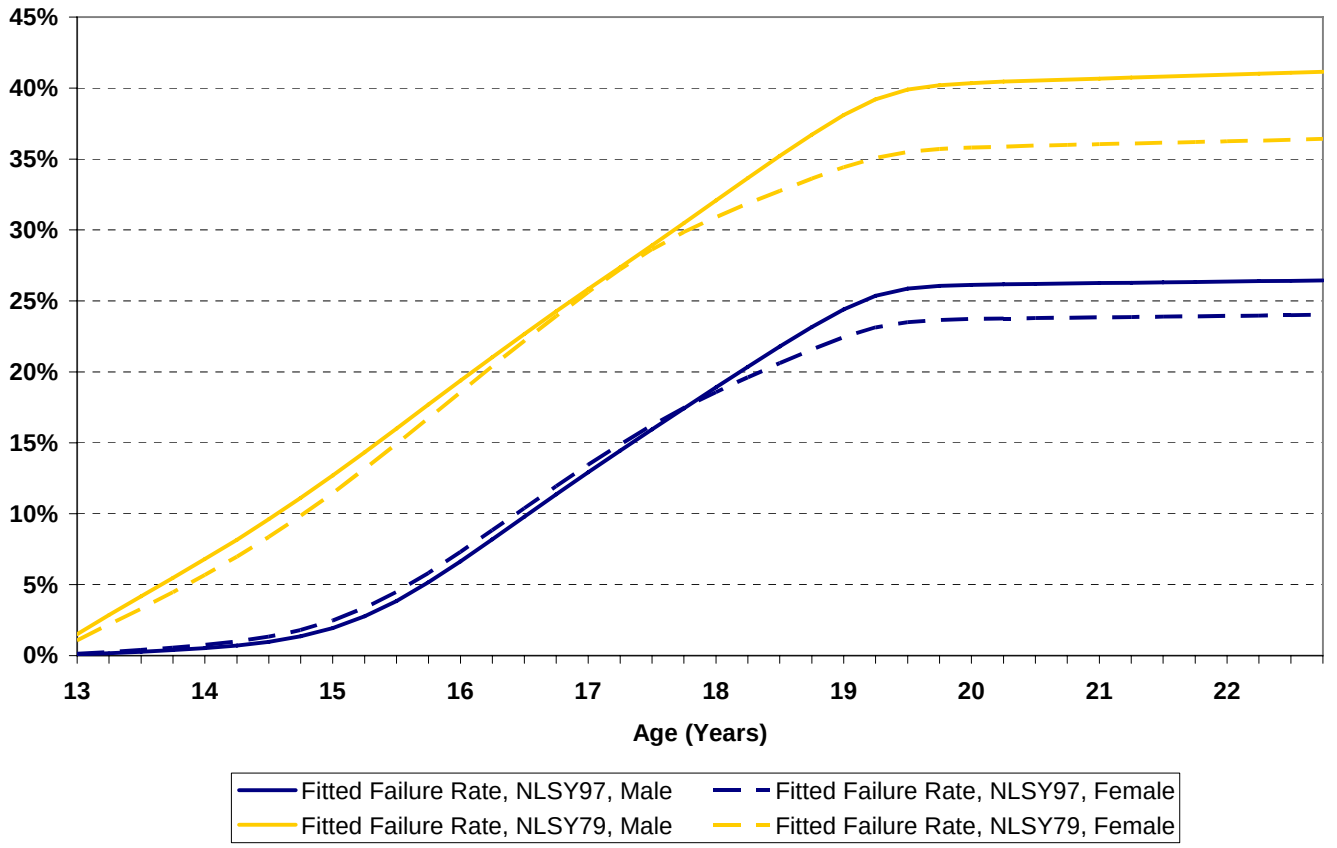

Figure 5.2: Probability of Returning to School or Entering the Labor Market Conditional on Dropping Out