# THE EDUCATIONAL ATTAINMENT PROCESS AMONG ADOLESCENTS WITH DISABILITIES AND CHILDREN OF PARENTS WITH DISABILITIES

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This paper expands on previous research on children's education by examining two groups of adolescents— those with disabilities and those who are children of parents with disabilities. We examine the effect of disability on parental and youth college expectations in 1997 as well as youth high school completion and college enrollment by 2003. Educational attainment is not equal for children with and without disabilities. Parents are likely to reduce their educational expectations when children have a mild or serious disability, regardless of their children's school performance. Parent's pessimism about their children's educational attainments negatively impacts high school graduation. But even net of lower educational expectations and poorer school performance serious adolescents' disabilities make high school graduation much less likely. Despite the considerable strides made in implementation of the Individuals with Disabilities Education Act, students with disabilities are not achieving educational parity in graded schooling. Successful efforts to promote high school graduation of children with disabilities would be a major step forward in improving their chances for a successful transition to adult life.

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## INTRODUCTION

The transition to adulthood is a multiyear period in the lives of most young Americans which begins in the teen years, continues through the 20s (Furstenberg 2000; Shanahan 2000), and marks a critical stage for individuals as they move from dependence on their families to becoming full adult participants in society. Educational attainment is a critical aspect of this transition. Previous research suggests that several groups are at risk of decreased educational attainment. For some children, *individual* characteristics such as race or ethnicity place them at a disadvantage due to disparate opportunity structures and institutional inequalities (Mare 1995). For others, *household* characteristics such as having parents with lower education (Haveman, Wolfe, and Spaulding 1991), living with a single parent (McLanahan and Sandefur 1994), or growing up in a poor family (Duncan and Brooks-Dunn 1997) reduces the familial resources available for children's human capital investment. This paper expands on these studies by examining the situation of two groups of adolescents previously ignored in research on educational attainment — those with disabilities and those who are children of parents with disabilities. It tests the hypotheses that the disability of a child or the disability of a parent are unrecognized, but critically important circumstances that limit educational attainment of young persons.

## EDUCATIONAL ATTAINMENT AND ADOLESCENTS WITH DISABILITIES

The education system in the United States plays a vital part in the transition to adulthood by both structuring the acquisition of skills and determining the timing of subsequent life transitions (Pallas 2003). The attainment of a high school degree marks the end of freely available education and the movement away from the student role. Postsecondary enrollment provides greater qualifications for entry into paid work and often further independence. While these educational transitions are important for all young adults, they are particularly essential for young persons with disabilities to become full participants in and contributing members to American society.

However, young people with disabilities face a variety of special circumstances that affect these transitions (Wells, Sandefur and Hogan 2003). Young persons with disabilities are more often members of racial, ethnic, and disadvantaged economic groups that face barriers to social achievement over their life course, in addition to the barriers associated with their disabilities. They face disadvantages in terms of family resources and are more likely to grow up in one-parent families, have parents with no more than a high school education, and live in poverty (Hogan, Rogers and Msall 2000). Family economic resources are critical to assist a young person with a disability attain an education because they can purchase specialized training and fund postsecondary enrollment and independent living (Wells, Sandefur and Hogan 2003). Furthermore,

other family characteristics (such as structure and household composition) are also powerful predictors of a young person's future long-term economic success (McLanahan and Sandefur 1994). In order to assess the overall effects of children's disabilities on educational attainment it is necessary to control for these confounding variables.

## The Importance of Expectations in Predicting Educational Attainment

The social and economic characteristics of a household are not the only important factors in predicting educational attainment for children with disabilities. . Adolescence is a time when most young people begin to formulate their plans for early life transitions. These early educational aspirations have a significant effect on later attainment (Sewell et al. 1969). However, some adolescents with disabilities may have difficulties in learning or planning for the future that may result in reduced agency in their life course (Shanahan 2000). Furthermore, adolescents with disabilities who do not receive appropriate accommodations or who have difficulty with standard methods of assessment may perform lower in school – an outcome that is also detrimental to young persons' educational expectations (Sewell, Haller, and Ohlendorf 1970). As a result, they may not envision prospective life course pathways that would enable them to live to their full potential.

The educational aspirations of parents for their children have a major influence on children's educational attainments (Sewell and Shah 1968, Hogan 1985). Parents act as vital socializing agents who offer information and encouragement about day-to-day decisions as well as advice about the future timing of life events. Parental expectations are especially important to help adolescents with disabilities assess their abilities and make choices about education. These aspirations may be adopted by their children, redefining a young person's ideas about their own agency in the transition to adulthood and creating a new projected life history. Parents of children with disabilities are likely to play an even greater role in helping these individuals develop realistic aspirations

However, parents vary in their views about children's attainment and the timing of life transitions. Parents of children with low academic performance have lower educational expectations than parents of higher achieving children (Sewell, Haller and Portes 1969). Parents with fewer socioeconomic resources and parents with lower levels of education also have lower educational aspirations for their children (Hogan 1985). We hypothesize that poor performance in school is the major signal parents of children with disabilities use in formulating educational expectations and encourage the educational expectations of their children accordingly.

## Children of Parents with Disabilities

Another factor complicating the educational attainments of all children may be the disability of the mother or father. A parent with a disability more often lacks the financial ability to maintain an educationally enriching physical environment than other

parents. Physical limitations may make them less able to participate in their children's school program and activities. It may be difficult for a mother or a father with a disability to effectively monitor their children's behavior. Based on the 2000 Census which includes measures of serious disabilities, Avery and Hogan (2006) estimate that about 13.0% of children without disabilities and one-third of children with disabilities grow up in families in which at least one parent is disabled on activities of daily living, making parental disability a considerable influence in the lives of many adolescent children. This phenomenon is even more common when work disability is included.

## THE SOCIAL CONTEXT OF DISABILITY AND EDUCATION

The restricted opportunities youth and young adults face are not simply the result of limitations in the capacities of individuals with disabilities; rather they emerge in interactions with social environments that may present obstacles to participation. Sometimes special equipment or services (such as a wheel chair, special transportation, or a companion aide) are not readily available in high school and are even more difficult to access for college enrollment. Furthermore, high school graduation and college enrollment opportunities may be limited for students in special education programs who do not have access to a college preparatory curriculum.

In recognition of this, legislation has been passed with the purpose of providing greater inclusion and participation in society. The Individuals with Disabilities Education Act, passed in 1975 and amended as recently as 1997, intends to improve the educational opportunities and educational results of children with disabilities, and to eventually prepare them for employment, independent living, and economic self-sufficiency. Specifically, public schools are required by law to provide children with disabilities a free public education and to provide services appropriate to individual needs. The act and its amendments have also underscored the importance of diagnosing disabilities, have emphasized greater integration into the general educational curriculum, and have required public school systems to develop an Individual Education Program (IEP) for each individual child with a disability. School systems have responded by becoming much more accommodating of the special needs of children with disabilities.

While the efforts of schools to incorporate children with disabilities into school life are often seen as a major improvement over the past when children with disabilities were sent to special institutions, the number of special educational needs that are recognized by the educational system has increased dramatically in recent years – especially for children with learning disabilities. This categorization of individuals with special education needs often takes on a public quality, often making other students aware of the fact that students with disabilities at least occasionally attend special classes, receive individualized services, or participate in other separate activities. The social labeling of a child's disability by their peers may further affect a young person's understanding of their own future educational potential.

In sum, significant social and physical barriers remain to individuals with disabilities – especially those with severe disabilities who continue to have very limited educational opportunities and face a difficult transition to gainful employment. While a considerable number of young people with disabilities continue their education or enter the labor force (Blackorby and Wagner, 1996; Horn, Berktold, and Bobbitt, 1999; Wells, Sandefur, and, Hogan, 2004), a substantial number leave high school and neither work nor continue their education (Blackorby and Wagner, 1996; Wells, Sandefur, and Hogan, 2004). In this paper we investigate the process through which this occurs.

Individuals with disabilities constitute a substantial minority among young persons making the transition to adulthood - the population of children with disabilities is about the same size as the population of children who are of African American ancestry. Compared to the past, many more young persons are recognized as having disabilities, and more of the seriously disabled are surviving childhood into the adult years (Hogan and Msall 2003). Approximately 12%-15% of school-age American children are estimated to have some type of disability (Westat 2000; Hogan et al 1997), and slightly more than 6 million children are enrolled in federally supported educational programs for those with disabilities (U.S. Department of Education 2001). This large population of at-risk adolescents merit attention by sociologists, who can provide insights into the family environment of representative samples of children with disabilities compared to youth without disabilities.

## DATA AND METHODS

The National Longitudinal Survey of Youth 1997 (NLSY97) is a nationally representative household-based sample of the non-institutional population of young persons in the United States (Bureau of Labor Statistics, 2005). This is a longitudinal study which annually collects data on an age cohort of children who were ages 12 to16 as of December 31, 1996. We utilize Wave I (1997) data in which parents provided information about the disability status of their child as well as Wave VII (2003) data in which children were old enough to have completed high school and enroll in postsecondary education. Wave I also ascertained the disability status of parents of the adolescents and parent figures who live in the same household (including biological parents, step-parents and adoptive parents, and other mother or father figures).

Educational expectations were asked only of children who were ages 15 and 16 as of December 31, 1996. The total sample for this analysis includes adolescents ages 15 to16 years (N = 3,054) in 1997, with a subsample of young persons in 2003 who attained at least a high school degree (N = 2,215). After excluding cases in which data were missing on any of the disability or control variables, we have 2,597 adolescents in 1997 (85%) of the eligible sample, 2,241 young persons with data on high school completion and enrollment status in 2003, and 1,968 with adolescents who are high school graduates and for whom there is information on college enrollment by 2003.

### *Disability Measures*

The World Health Organization (2001) developed the International Classification of Functioning, Disability, and Health (ICF) model which describes a person's health and well-being in terms of four components: (1) body structures, (2) body functions, (3) activities, and (4) participation. Population surveys are well-suited to the measurement of limitations in activities and participation (Hogan & Msall 2006). Activities are tasks, including learning, communicating, walking, carrying, feeding, dressing, toileting, bathing, reading, preparing meals, shopping, washing clothes. Participation refers to age-appropriate involvement in play, school, work, and community life.

Ideally, we would have preferred to have information on limitations in both activities and participation both for children and their parents; we do not. We have information only about activity limitations for children and about work participation limitations for their parents. We know from other work we have done with the 1996 Panel of the Survey of Income and Program Participation and the 2000 Census that many more parents report disabilities that prevent work than report activity limitations. The parents whose disabilities we are missing in this study are those who have an activity limitation but not a work limitation. The omission of these cases is likely to increase the size of the coefficients for the effects of parental disabilities on the family environment for development insofar as we are identifying disabilities that are likely to have the most immediate and serious consequences for family life. The focus in this paper therefore is on the disability status of children measured by activity limitations and the disability status of parents as measured by disability that prevents employment.

Child disability status is constructed from four domains for which parents reported youth activity limitations in 1997 -- learning or emotional disabilities, sensory limitations, physical disabilities, or chronic illness. The small number of children with limitations precludes analyses for each aspect of disability. Therefore, we have abstracted across these variables to determine if a child has one or more severe functional limitations ("currently limited a lot"), or no severe limitation but one or more mild limitations ("currently limited a little"). Remaining children are classified as having one or more past limitations ("not currently limited") or as never having limitations. The validity of the disability measure was then examined against other indicators associated with special health care needs, including overall health reports, school attendance records, and histories of remedial learning (tabulations not shown). The constructed measure of youth disability was strongly linked to these related health variables.

Ten percent of children have mild disabilities ("currently limited a little") and 3.3% of children have seriously limiting disabilities ("currently limited a lot"). Of the 252 children in the sample with any kind of disability, 34% have a learning disability only, 1% has a missing or deformed body part only, 29% have a chronic health condition only, and 35.6% have a sensory condition only. Parents also reported that their children had multiple limiting conditions (10%); of the total number of children with disabilities, 1% has a learning disability and a missing or deformed body part, 4% have a learning disability and a chronic health condition, and 7% have a learning disability and a sensory condition (see Appendix Table 1 for additional information). But the children with

disabilities in this study do not have severe cognitive disabilities—they are able to participate in long interviews on complex topics.

The measures of maternal and paternal disability status are derived from parental respondents' interviews and refer to current long-term health problems or conditions that limit participation in any type or amount of employment. Twenty-one percent of children in the entire sample live in households with at least one parent with a disability.

*Parent and Youth Educational Expectations*

Our analysis includes measures of both parental and youth expectations about college enrollment. The residential parents who completed the parent interview and the youth respondents were asked, "Now think ahead to the time when [this youth/you] turn(s) 30 years old. What is the percent chance that [this youth/you] will have a four-year college degree by the time (s)he/you turn(s) 30?" Many parents and children report they are nearly 100% certain of college enrollment. To adjust for this skewed distribution, parental and adolescent expectations about the probability of college enrollment are logged in the statistical analysis. We utilize OLS regression models to examine the effect of disability status and child, household, and educational characteristics on parental college expectations (Table 2). A second series of models estimates youth college expectations, including the effect of parental college expectations (Table 3). These are semi-logged equations in which the coefficient of the effects of an independent variable can be interpreted as the percent change in the dependent variable associated with a one unit increase in the independent variable.

*Educational Attainment*

Binary logistic regression models are used to estimate the effects of family factors and disability status on high school completion (or the attainment of a GED) for young persons with complete information on educational enrollment status (Table 4). High School completion is measured in 2003 when all of the adolescents included in this study were at least 22 years of age. Models of college enrollment are then estimated only for young persons who have completed their high school diploma (or GED). A variable measuring exposure time (years since high school diploma) is included as a control.

## RESULTS

Looking at children with one or more parent-figures in the household 58% of children have a parent with a high school (but not college) degree; another 29% have at least one parent who is a college graduate (Table 1). Fifty-five percent of children live in two parent families, 41% live in one parent families, and 4% live in households in which a parent-figure but not a biological parent is present. Nearly 74% of the parents are regularly involved in their children's schools (operationalized here as volunteering at the school or attending parent-teacher organization meetings). Roughly 13% of households are at or below the poverty line and another 21% are near poverty.

In order to understand the effects of disability on the educational attainment process, we need to assess the extent to which these disabilities limit educational attainment through slow academic progress, and the extent to which they have effects net of any academic accomplishments or by signaling to parents that their children have limited academic prospects. Nearly 24% of children have received remedial education and 19% have repeated a school year. On average children miss about 6 days of school, but there is great variability around this number with some students missing large numbers of school days. We include a control for the percentage of peers the adolescents expect to graduate for college in order to assess the net effects of disability status, taking into account sorting of children with disabilities into special education peer groups. These values vary relatively little between all adolescents and those who graduate from high school, with the graduates having slightly more favorable socioeconomic backgrounds, somewhat fewer students with disabilities, and better early academic performance.

[Table 1 here]

*Family Factors*

The findings regarding household resources are in line with previous studies of parental educational expectations. Parents with a high school degree, and especially those with a college education, have a much higher expectation that their children will complete college (Table 2). The more economically secure the family the higher the expectation that their children will complete college. Children living in non-parental households have parent-figures who have much lower expectations that they will complete college even taking into account their poorer socioeconomic situations. Parents who are involved in their children's schools have higher expectations of college graduation.

[Table 2 here]

Children in households with one biological parent are about equally as likely to expect a college education as those of children in households with both biological parents (Table 3). Socioeconomic status has an effect on the youths' college expectations, and greater financial wellbeing increases parental expectations as well as the likelihood of children completing high school. Parents who regularly are involved in school activities have higher educational expectations for their children and the adolescents also have higher college expectations.

[Table 3 here]

The effects of parents' involvement in schools on high school graduation and college enrollment are mediated through its effects on parent and youth expectations.

*School Performance*

Lower marks in the eighth grade reduce the college expectations of both parents and young persons. They are a major predictor of successful completion of high school and enrollment in college. When a young person has been in a remedial course of study, the parents reduce their college expectations. Students themselves do not see their educational success as reduced when they have been involved in remedial education. While remedial education is a signal to parents about their child's capacity to learn, children themselves seem to view it as simply another pathway to learning rather than as a signal of educational failure. In line with this, the likelihood of high school graduation is unaffected by enrollment in remedial education courses (Table 4). But even though youth may think it will have no effect on their college ambitions, enrollment in college is about one-third less for those who have had remedial educations. The likelihood peers will attend college is strongly associated with educational expectations and the completion of high school, but not the likelihood of actually attending college (among the high school graduates).

[Table 4 here]

*Disability Status*

Parents with disabilities have lower college expectations for their children. This is true taking into account the poorer economic circumstances of families in which a parent cannot work. Parents who have a work disability are less likely to think their children will complete college; however, these effects are reduced to non-significance when one takes into account information about the school attainments of their children. Parental disability has no impact on the college expectations of their children. Indicators of variables associated with learning disabilities such as lower grades, enrollment in some form of remedial education, and more school days missed are all associated with lowered college expectations of parents. Parental disability does not reduce the likelihood of their children completing high school or enrolling in college, taking into account their lowered educational expectations. Parents with disabilities thus are more pessimistic about their children's future educational attainment but the children themselves seem relatively unaffected by their pessimism. This partly may reflect parental worries that their work disability will reduce the financial resources to support their children's college enrollment.

When a child has a mild disability parents have lower college expectations. When a child has a seriously limiting disability parents think it is very unlikely they will attend college. Even net of the factors signaling educational ability, parents reduce their expectations that children will receive a college education for children with both mild and serious disabilities. Thus, net of educational attainment indicators of learning disabilities, parents see their children with disabilities as having less opportunity to attend college.

Children also see their disabilities as detrimental to completing college, but these lower assessments are associated with their weaker academic performance in graded schooling. Net of these indicators of learning disabilities, children with serious disabilities lower their expectations of college attendance, but the effect is only one-third

that for parental expectations of college completion. Taking into account social origins, parental expectations, and their own academic performance, children with serious disabilities are only 49% as likely as other children to complete high school. This is a large effect—the coefficient for the impact of a serious youth disability on high school completion is two times greater than the coefficient associated with a parent who is a high school graduate (compared to those who were not high school graduates).The major impact of children's disability on college enrollment is mediated through this deficit in high school education. When youth with serious disabilities are able to graduate from high school they are equally likely as other children to go on to college.

## CONCLUSIONS

Like previous research on children with disabilities and educational outcomes, our paper suggests that educational attainment is not equal for children with and without disabilities. Parents are likely to reduce their educational expectations when children have a mild or serious disability, regardless of their children's school performance. This finding is particularly troublesome because disability does not significantly reduce children's own expectations after accounting for academic performance. Parent's pessimism about their children's educational attainments negatively impact on high school graduation. But even net of their lowered expectations and the school performance of their children, young person's disabilities make high school graduation much less likely. The negative impact of children's severe disabilities on the likelihood of high school graduate may be even greater than the parents anticipate.

The analyses presented here also imply that once children with disabilities attain a high school degree, no significant difference exists between children with disabilities and children without disabilities, after taking family origins and educational performance into account. Thus, school performance plays a vital role in mediating the detrimental effects of a child's disability for college enrollment. However, the effect of serious disability remains for high school completion, making parental expectations even more important in encouraging adolescents with disabilities to attain a high school diploma in order to attend college. Despite the considerable strides made in implementation of the Individuals with Disabilities Education Act, students with disabilities are not achieving educational parity in graded schooling. Successful efforts to promote high school graduation of children with disabilities would be a major step forward in improving their chances for a successful transition to adult life.

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## TABLE 1: Descriptive statistics for independent measures used in the analyses

| | Weighted Means | |
|---|---|---|
| | All youth † | H.S. degree θ |
| *Household characteristics* | | |
| Household income 1x poverty level | 0.173 | 0.163 |
| | (0.179) | (0.176) |
| Household income 2x poverty level | 0.211 | 0.212 |
| | (0.193) | (0.194) |
| Household income 3x poverty level or higher | 0.472 | 0.496 |
| | (0.237) | (0.238) |
| Parental education – high school graduate | 0.582 | 0.582 |
| - HS degree and parents with HS degree plus some college | (0.234) | (0.235) |
| Parental education – college graduate | 0.291 | 0.319 |
| - College degree and parents with higher degrees | (0.215) | (0.222) |
| No biological parents | 0.042 | 0.039 |
| - No biological parents in the household | (0.095) | (0.093) |
| One biological parent | 0.406 | 0.382 |
| - One biological parent in the household | (0.233) | (0.231) |
| At least one parent with a disability | 0.211 | 0.199 |
| | (0.193) | (0.190) |
| *Child characteristics* | | |
| Male | 0.515 | 4.993 |
| | (0.237) | (0.238) |
| Hispanic | 0.113 | 0.113 |
| | (0.150) | (0.150) |
| Black | 0.146 | 0.143 |
| - Non-Hispanic Black | (0.168) | (0.167) |
| Mild youth disability | 0.100 | 0.095 |
| - Youth currently "limited a little" by a disability | (0.142) | (0.139) |
| Serious youth disability | 0.033 | 0.025 |
| - Youth currently "limited a lot" by a disability | (0.085) | (0.074) |
| *Educational characteristics* | | |
| Overall grades in 8$^{th}$ grade | 5.739 | 5.914 |
| - Scale of 1-8 | (0.808) | (0.776) |
| Remedial education[a] | 0.235 | 0.227 |
| - Participation in remedial classes or special school | (0.201) | (0.199) |
| Days absent from school, fall semester 1997 | 5.572 | 4.969 |
| - Total days missed | (4.183) | (3.877) |
| Repeated school year | 0.188 | 0.143 |
| - Repeated an academic year at least once | (0.185) | (0.167) |
| Parental educational involvement | 0.746 | 0.759 |
| - Volunteering at school or involvement in PTO | (0.206) | (0.203) |
| Percent of peers who plan to attend college (quartile) | 2.578 | 2.639 |
| - 1-4 scale of quartiles (0-24%, 25-49%, 50-74%, 75-100%) | (0.467) | (0.457) |

Data shown are weighted means with standard deviations in parentheses
† Number = 2597; θ Number = 1968
[a] Includes control for non-response (results not shown)

## TABLE 2: OLS Regression Predicting Logged Parental Educational Expectations, 1997

| | Model 1 | Model 2 |
|---|---|---|
| *Household characteristics* | | |
| Household income 1x poverty level | 0.202 ** | 0.197 ** |
| | (0.072) | (0.069) |
| Household income 2x poverty level | 0.311 *** | 0.234 ** |
| | (0.077) | (0.074) |
| Household income 3x poverty level or higher | 0.507 *** | 0.353 *** |
| | (0.076) | (0.073) |
| Children in household | 0.045 * | 0.049 ** |
| | (0.019) | (0.018) |
| Parental education – high school graduate | 0.300 *** | 0.230 *** |
| | (0.066) | (0.064) |
| Parental education – college graduate | 0.620 *** | 0.402 *** |
| | (0.082) | (0.079) |
| No biological parents | -0.439 *** | -0.365 *** |
| | (0.106) | (0.101) |
| One biological parent | -0.063 | 0.053 |
| | (0.049) | (0.047) |
| At least one parent with a disability | -0.121 * | -0.069 |
| | (0.055) | (0.053) |
| *Child characteristics* | | |
| Male | -0.226 *** | -0.074 |
| | (0.044) | (0.044) |
| Hispanic | 0.268 *** | 0.304 *** |
| | (0.066) | (0.063) |
| Black | 0.247 *** | 0.328 *** |
| | (0.057) | (0.056) |
| Mild youth disability | -0.336 *** | -0.155 * |
| | (0.075) | (0.073) |
| Serious youth disability | -0.968 *** | -0.708 *** |
| | (0.128) | (0.123) |
| *Educational characteristics* | | |
| Overall grades in 8th grade | | 0.142 *** |
| | | (0.014) |
| Remedial education[a] | | -0.127 * |
| | | (0.051) |
| Days absent from school, fall semester 1997 | | -0.007 ** |
| | | (0.002) |
| Repeated school year | | -0.295 *** |
| | | (0.058) |
| Parental educational involvement | | 0.202 *** |
| | | (0.050) |
| Percent of peers who plan to attend college | | 0.109 *** |
| | | (0.022) |
| $R^2$ | .128 | .214 |

* $p < .05$, ** $p < .01$, *** $p < .001$; Number = 2597

Data shown are OLS coefficients with standard errors in parentheses

[a] Includes control for non-response (results not shown)

## TABLE 3: OLS Regression Predicting Logged Youth Educational Expectations, 1997

| | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| *Household characteristics* | | | |
| Household income 1x poverty level | 0.084<br>(0.064) | 0.071<br>(0.061) | 0.007<br>(0.057) |
| Household income 2x poverty level | 0.200 **<br>(0.068) | 0.140 *<br>(0.066) | 0.063<br>(0.061) |
| Household income 3x poverty level or higher | 0.213 **<br>(0.067) | 0.080<br>(0.065) | -0.035<br>(0.061) |
| Children in household | -0.003<br>(0.017) | 0.002<br>(0.016) | -0.014<br>(0.015) |
| Parental education – high school graduate | 0.290 ***<br>(0.059) | 0.238 ***<br>(0.057) | 0.163 **<br>(0.053) |
| Parental education – college graduate | 0.663 ***<br>(0.072) | 0.494 ***<br>(0.071) | 0.363 ***<br>(0.066) |
| No biological parents | 0.019<br>(0.094) | 0.077<br>(0.090) | 0.196 *<br>(0.084) |
| One biological parent | -0.081<br>(0.043) | 0.014<br>(0.042) | -0.004<br>(0.039) |
| At least one parent with a disability | -0.081<br>(0.048) | -0.037<br>(0.047) | -0.015<br>(0.044) |
| *Child characteristics* | | | |
| Male | -0.231 ***<br>(0.039) | -0.128 ***<br>(0.039) | -0.104 **<br>(0.036) |
| Hispanic | 0.210 ***<br>(0.058) | 0.247 ***<br>(0.056) | 0.148 **<br>(0.052) |
| Black | 0.219 ***<br>(0.051) | 0.271 ***<br>(0.049) | 0.164 ***<br>(0.046) |
| Mild youth disability | -0.143 *<br>(0.066) | -0.011<br>(0.065) | 0.039<br>(0.061) |
| Serious youth disability | -0.315 **<br>(0.113) | -0.110<br>(0.110) | 0.121<br>(0.103) |
| *Educational characteristics* | | | |
| Overall grades in 8th grade | | 0.098 ***<br>(0.013) | 0.051 ***<br>(0.012) |
| Remedial education[a] | | -0.066<br>(0.046) | -0.025<br>(0.043) |
| Days absent from school, fall semester 1997 | | -0.010 ***<br>(0.002) | -0.007 ***<br>(0.002) |
| Repeated school year | | -0.128 *<br>(0.051) | -0.031<br>(0.048) |
| Parental educational involvement | | 0.189 ***<br>(0.044) | 0.123 **<br>(0.041) |
| Percent of peers who plan to attend college | | 0.141 ***<br>(0.020) | 0.105 ***<br>(0.019) |
| Parental college expectations (logged) | | | 0.327 ***<br>(0.016) |
| $R^2$ | .086 | .162 | .274 |

* $p < .05$, ** $p < .01$, *** $p < .001$
Standard errors in parentheses; Number = 2597
[a] Includes control for non-response (results not shown)

## TABLE 4: Logistic Regression Predicting Youth Educational Attainment, 2003

| | High School † | | College θ | |
|---|---|---|---|---|
| | Coeff. | O.R. | Coeff. | O.R. |
| *Household characteristics* | | | | |
| Household income 1x poverty level | 0.113 | 1.120 | -0.069 | 0.933 |
| | | (0.207) | | (0.178) |
| Household income 2x poverty level | 0.265 | 1.303 | -0.050 | 0.951 |
| | | (0.253) | | (0.192) |
| Household income 3x poverty level or higher | 0.653 | 1.922 * | 0.439 | 1.551 |
| | | (0.287) | | (0.196) |
| Children in household | -0.032 | 0.969 | -0.050 | 0.951 |
| | | (0.060) | | (0.048) |
| Parental education – high school graduate | 0.645 | 1.906 *** | 0.345 | 1.412 * |
| | | (0.185) | | (0.173) |
| Parental education – college graduate | 1.586 | 4.882 *** | 1.071 | 2.918 *** |
| | | (0.409) | | (0.227) |
| No biological parents | -0.688 | 0.502 * | -0.533 | 0.587 * |
| | | (0.312) | | (0.266) |
| One biological parent | -0.240 | 0.787 | -0.245 | 0.783 |
| | | (0.184) | | (0.128) |
| At least one parent with a disability | -0.062 | 0.940 | 0.011 | 0.950 |
| | | (0.185) | | (0.145) |
| *Child characteristics* | | | | |
| Male | -0.291 | 0.748 | -0.348 | 0.706 ** |
| | | (0.166) | | (0.120) |
| Hispanic | -0.242 | 0.785 | 0.157 | 1.170 |
| | | (0.229) | | (0.172) |
| Black | -0.078 | 0.925 | 0.139 | 1.149 |
| | | (0.205) | | (0.153) |
| Mild youth disability | 0.268 | 1.307 | 0.393 | 1.481 |
| | | (0.246) | | (0.202) |
| Serious youth disability | -0.718 | 0.488 * | -0.370 | 0.690 |
| | | (0.315) | | (0.369) |
| *Educational characteristics* | | | | |
| Overall grades in 8th grade | 0.299 | 1.349 *** | 0.270 | 1.310 *** |
| | | (0.053) | | (0.041) |
| Remedial education[a] | -0.132 | 0.877 | -0.400 | 0.670 ** |
| | | (0.183) | | (0.135) |
| Days absent from school, fall semester 1997 | -0.027 | 0.973 *** | -0.031 | 0.970 ** |
| | | (0.007) | | (0.009) |
| Repeated school year | -0.996 | 0.369 *** | -0.550 | 0.577 *** |
| | | (0.171) | | (0.154) |
| Parental educational involvement | 0.221 | 1.247 | 0.210 | 1.233 |
| | | (0.172) | | (0.133) |
| Percent of peers who plan to attend college | 0.193 | 1.213 * | -0.002 | 0.998 |
| | | (0.078) | | (0.061) |
| Parental college expectations (logged) | 0.199 | 1.220 *** | 0.324 | 1.382 *** |
| | | (0.055) | | (0.066) |
| Youth college expectations (logged) | 0.113 | 1.120 | 0.388 | 1.474 *** |
| | | (0.067) | | (0.074) |
| Years since high school degree | | | 0.321 | 1.378 *** |
| | | | | (0.065) |
| -2 Log Likelihood | 1081.615 | | 1853.627 | |

* $p < .05$, ** $p < .01$, *** $p < .001$; standard errors in parentheses; †Number = 2241 θ Number = 1968

[a] includes control for non-response (results not shown)

**Appendix Table 1: Prevalence of youth disability by type**

| Type of condition | Number of Youth |
|---|---|
| *Learning or emotional condition*<br>Does [this youth] now have or has [he/she] ever had a learning or emotional problem that limits or has limited the kind of schoolwork or other daily activities [he/she] can perform, the amount of time [he/she] can spend on these activities or [his/her] performance in these activities? | 119 |
| *Missing or deformed body part*<br>Does [this youth] now have or has [he/she] ever had a part of [his/her] body that (is/was) deformed or missing? | 7 |
| *Sensory limitation*<br>Does [this youth] now have or has [he/she] ever had trouble seeing, hearing or speaking? | 77 |
| *Chronic health condition*<br>Does [this youth] now have or has [he/she] ever had any other chronic health condition or life threatening disease such as asthma, heart condition, anemia, diabetes or cancer? | 89 |

Data shown are parental reports of youths' currently limiting conditions in 1997
252 youth have at least one current limitation; 38 youth have more than one current limitation