Duke

CENTER for CHILD and FAMILY POLICY

America's Promise Alliance Evaluation

# Education Outcomes for Economically Disadvantaged Youth: A Look at 9th Graders

January 31, 2013

Authored by:

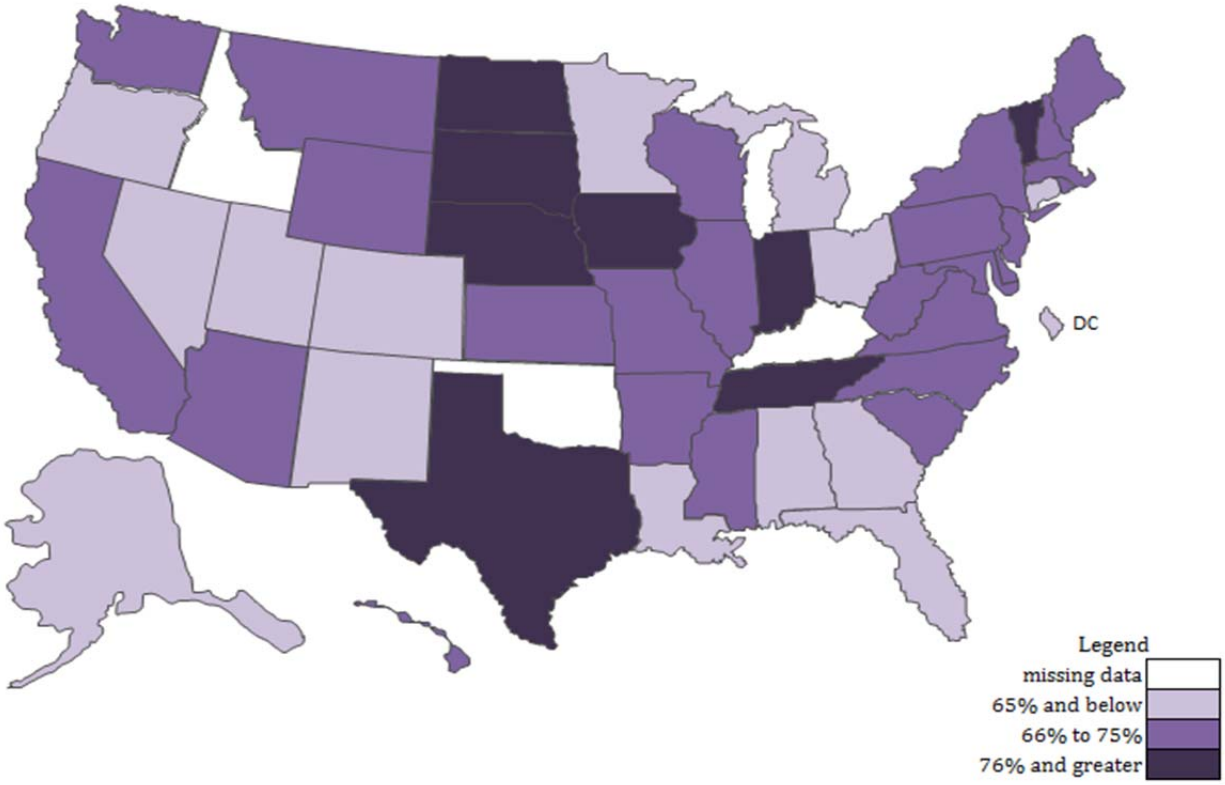
Beth Gifford, Ph.D.
and Kelly Evans, MPH

Center for Child and Family Policy
Duke University
Box 90545-0545
Durham, NC 27708-0264

# Introduction

National figures highlight a large academic achievement gap by family income. According to the Nation's Report Card, the gap in the percent of children meeting basic proficiency in 4th, 8th, and 12th grade math and reading by family income is 20-35 percentage points (1). For example, 52% of children from economically disadvantaged[1] families achieved basic proficiency in 4th grade reading relative to 82% of children from non-economically disadvantaged families. Children from lower income families are more likely to leave high school without earning a diploma (2) (see Figures 1 and 2). Among youth who do graduate from high school, those from lower income families are less likely to immediately enroll in a 2 or 4 year college –with 52% of youth from families in the bottom 20% of the income distribution relative to 82% of youth in the top 20% of the income distribution (3).

Fig 1. 2010-2011 High School Graduation Rates for Economically Disadvantaged Students by State

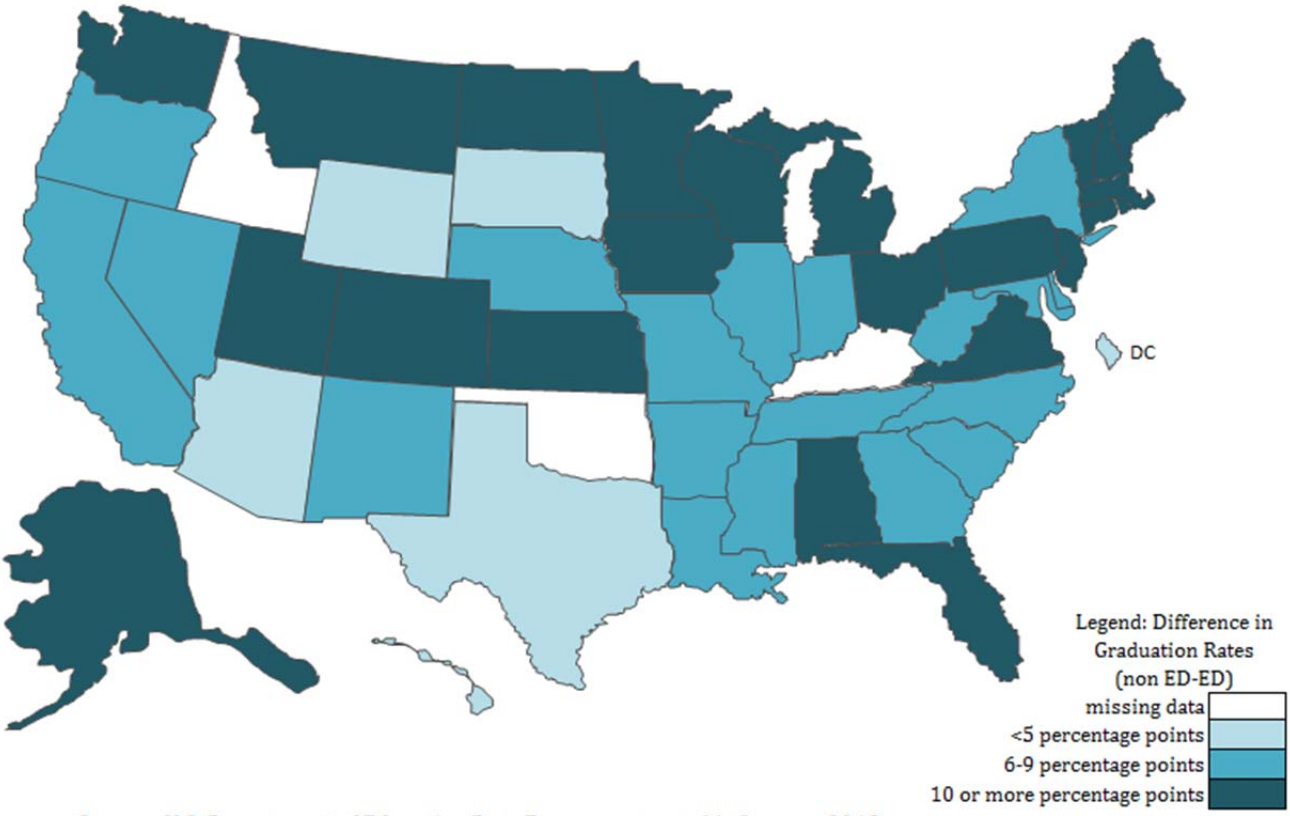



Source: U.S. Department of Education Data Express extracted in January 2012

Notes: High School Graduation Rate is based on the Adjusted Four Year Cohort Graduation Rate. Economically disadvantaged refers to youth in families at or below 185% of the poverty line.

[1] Throughout this report economically disadvantaged is used to indicate incomes of at or below 185% of the federal poverty line (FPL).

Figure 2. Comparison of 2010-2011 Graduation Rates by Economic Disadvantage Status

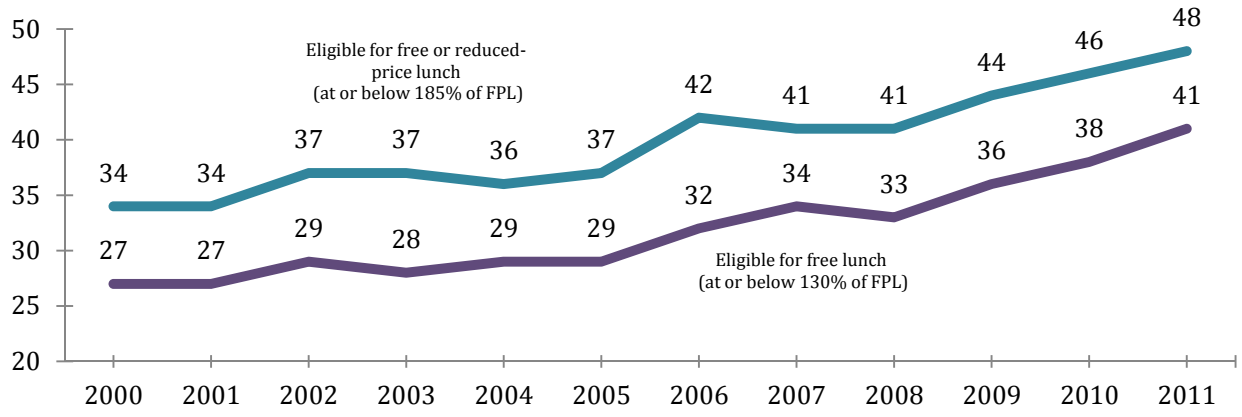



Source: U.S. Department of Education Data Express extracted in January 2012

Notes: High School Graduation Rate is based on the Adjusted Four Year Cohort Graduation Rate. ED, economically disadvantaged, refers to youth in families below 185% of the poverty line.

Perhaps even more concerning is that the gap in academic performance by family income has been widening during the last 60 years—with youth from lower income families falling further behind (4). Meanwhile, due to the recent Great Recession, the percent of children living at or near poverty has increased (5). Figure 1 shows the growth of children eligible for the free and reduced lunch program (see Figure 1). This program provides free or reduced price meals children from families below 185% of poverty ($42,643 for a family of four in 2012) (6). In 2011, 48% of all children in public school qualified for assistance from this program.

Figure 3. Percent of Students Eligible for Free or Reduced Price Lunch




*Source*: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey."

This report examines factors known to predict educational attainment and compares youth by family income level. We use a nationally representative sample of 9th graders and compare youth in economically and non-economically disadvantaged households. Ninth grade is a pivotal transition year for students. For most students it marks their transition to high school where students begin to make choices for themselves that affect what courses they take (7). It is the grade which students are most likely to repeat. In fact, simply advancing from 9th to 10th grade is a strong predictor of graduating high school (8). The factors examined in this report include:

A. Student and parent achievement expectations
B. Self-efficacy
C. Motivation to excel at school
D. Student emotional, mental and behavioral difficulties at school
E. Number of school changes
F. Experiences at school

Living in an economically disadvantaged family is associated with a host of challenges including food insecurity, job instability, residential instability, lack of access to health care, poor health and more stress (9, 10). In light of these factors which can interfere with a youth's ability to excel in school, it is not surprising that children living in low income families struggle academically (11, 12).

For the year 2020, America's Promise Alliance has set a national goal of a 90% high school graduation rate (13) and President Obama has established a goal of having the highest proportion of college graduates by the year 2020 (14). According to the latest statistics from 2010-2011, the current high school graduation rate is about 75% (2) and the United States ranks 16th in the percent of 25 to 34 year olds with college degrees (15). Meeting the nation's 2020 education goals requires addressing the needs of all students—including the nearly half (of public school students) who are economically disadvantaged—both within and outside of school.

## A. Student and Parent Achievement Expectations

*Rationale:* Student and parent expectations for their future predict their level of achievement (16, 17). Students' and parents' high expectations for academic achievement often positively influences the students' likelihood of graduating high school as well as the post-secondary education that they actually attain (18, 19).

*Measures:* Two measures related to achievement expectations were examined. The first were student responses to "How sure are you that you will graduate from high school?" The second, students and parents were asked "How far in school will the ninth grader go?" The options were: less than high school, high school diploma or GED, start (or complete) an associate's degree, start (or complete) a bachelor's degree, start (or complete) a master's degree, start (or complete) a Ph.D., M.D., Law or other professional degree, and don't know. The categories "start" and "complete" for each degree type were combined because few respondents reported that they would start but not complete the degree. College refers to a bachelor's degree or beyond.

*Findings:* While 90 percent of 9th graders in non-economically disadvantaged families were "very sure about graduation" compared with 78 percent of 9th graders from disadvantaged families (see figure A.1), a smaller percent of 9th graders from disadvantaged families expect to earn a college degree (49% vs 67%). The lower expectations for college attendance among the economically disadvantaged are mirrored in parental responses (46% vs 74%) (See figure A.2).

Figure A.1. 9th grader beliefs about graduating high school

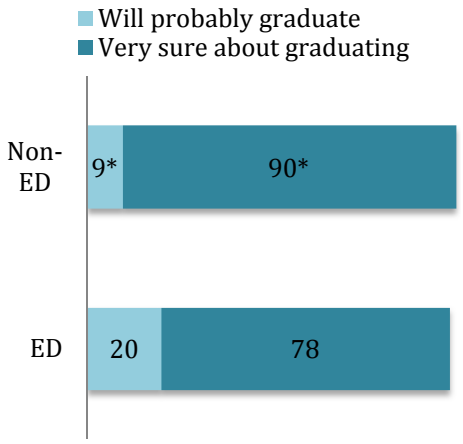
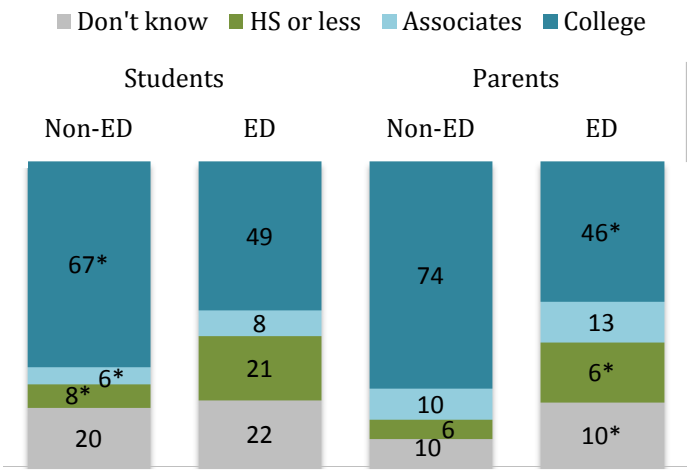



Figure A.2. Student and Parent Expectations for College




Note: * indicates the difference between economically disadvantaged and non-economically disadvantaged were statistically significantly different at p<=.05
Non-ED is non-economically disadvantaged. ED is economically disadvantaged.

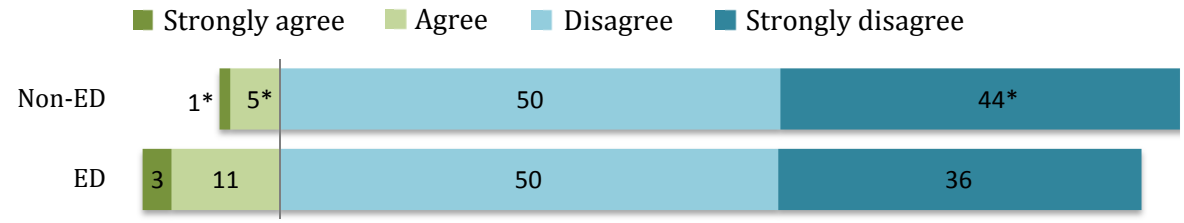
## B. Self-efficacy

*Rationale:* Academic self-efficacy is the student's belief that they can be successful in a specific academic task or achieve a specific academic goal (20). Compared to students with low self-efficacy, students with higher self-efficacy are more likely to engage in tasks and activities that they perceive as difficult and that might not have immediate or obvious positive outcomes (21).

*Measures:* Two measures related to self-efficacy and achievement expectations were examined. The first were student responses to "How much do you agree or disagree with the following statement: Even if you study, you will not be able to get into college?" Next we examined students' responses to "Whatever your plans, do you think you have the ability to complete a Bachelor's degree?"

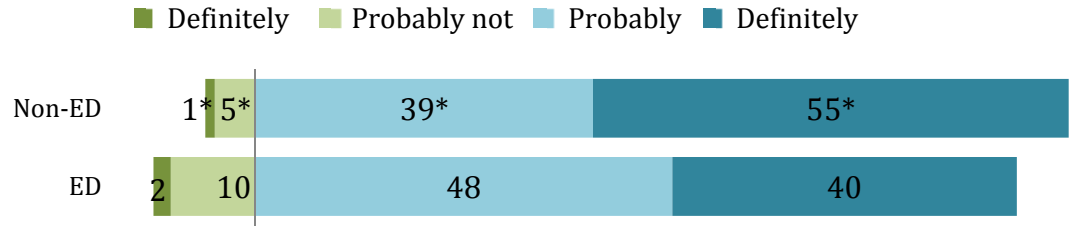
*Findings:* Differences in self-efficacy to get accepted to college and complete a college degree are apparent by family economic status. A higher percent of students from non-economically disadvantaged families "strongly disagreed" that even if they studied they would not get into college (44% vs 36%) (See figure B.1) and "definitely" believed that they could complete a bachelor's degree (55% vs 40%) (See figure B.2).

Figure B.1 9th Grader Beliefs: "Even if I study, I won't get into college"




Note: * indicates the difference between economically disadvantaged and non-economically disadvantaged were statistically significantly different at p<=.05
Non-ED is non-economically disadvantaged. ED is economically disadvantaged.

Figure B.2. 9th Grader Beliefs: "What ever your plans, do you think you have the ability to complete a college degree?"




Note: * indicates the difference between economically disadvantaged and non-economically disadvantaged were statistically significantly different at p<=.05
Non-ED is non-economically disadvantaged. ED is economically disadvantaged.

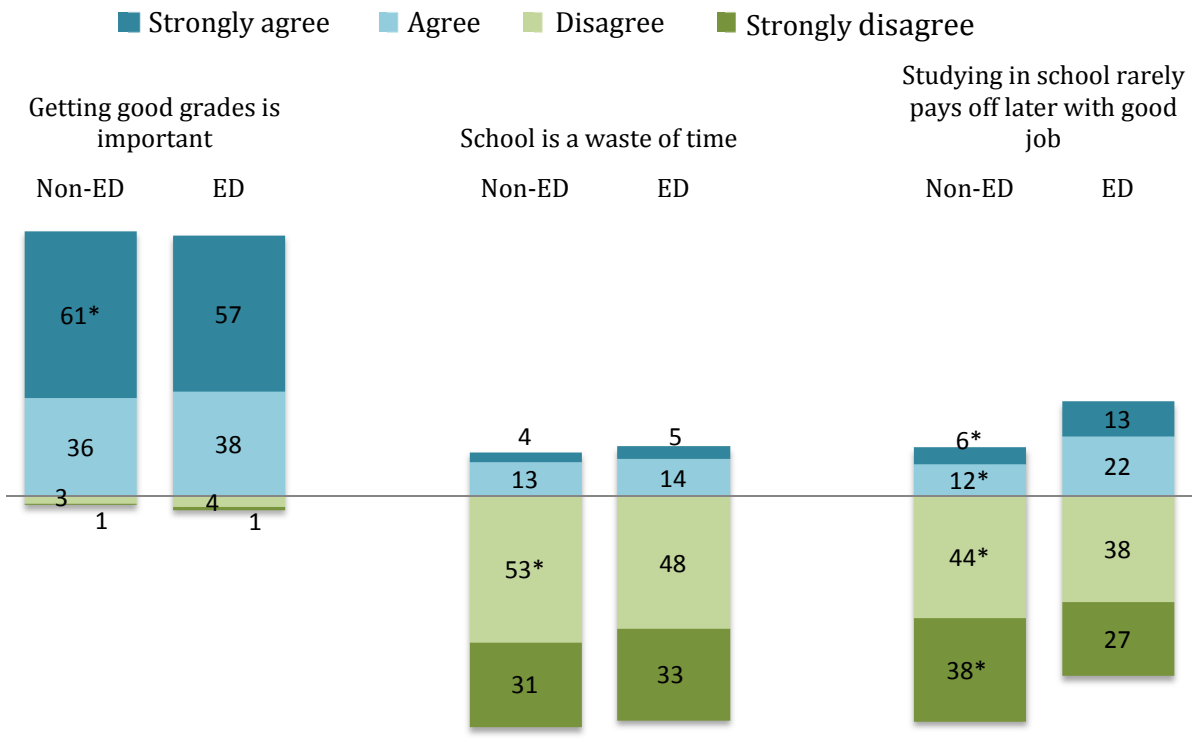
## C. Motivation to excel at school

*Rationale:* Student beliefs about the value of school are an important determinant of high school completion (22). Beliefs that success in school is important for college entry or career choice can motivate students to invest in their coursework (16). One way to motivate students is to help them understand the relevance of the work to their future. When students understand the relevance of the task to their future, they are more likely to engage in their coursework (23).

*Measures:* Three measures were used to examine family income level differences in motivation for school: student thinks that studying in school rarely pays off later with a good job; student feels that school is often a waste of time; and student feels that getting good grades is important.

*Findings:* Most students, regardless of family economic circumstances, believed that getting good grades was important--with slightly higher percent of advantaged youth "strongly agreeing" that this was the case (61% vs 57%). Similarly, most students disagreed that school was a waste of time. A higher percent of students from economically disadvantaged families "agreed" or "strongly agreed" that studying in school rarely pays off (35% vs 18%).

Figure C.1 9th Grader Beliefs about the Value of School




Note: * indicates the difference between economically disadvantaged and non-economically disadvantaged were statistically significantly different at p<=.05
Non-ED is non-economically disadvantaged. ED is economically disadvantaged.

## D. Student emotional, mental and behavioral difficulties at school

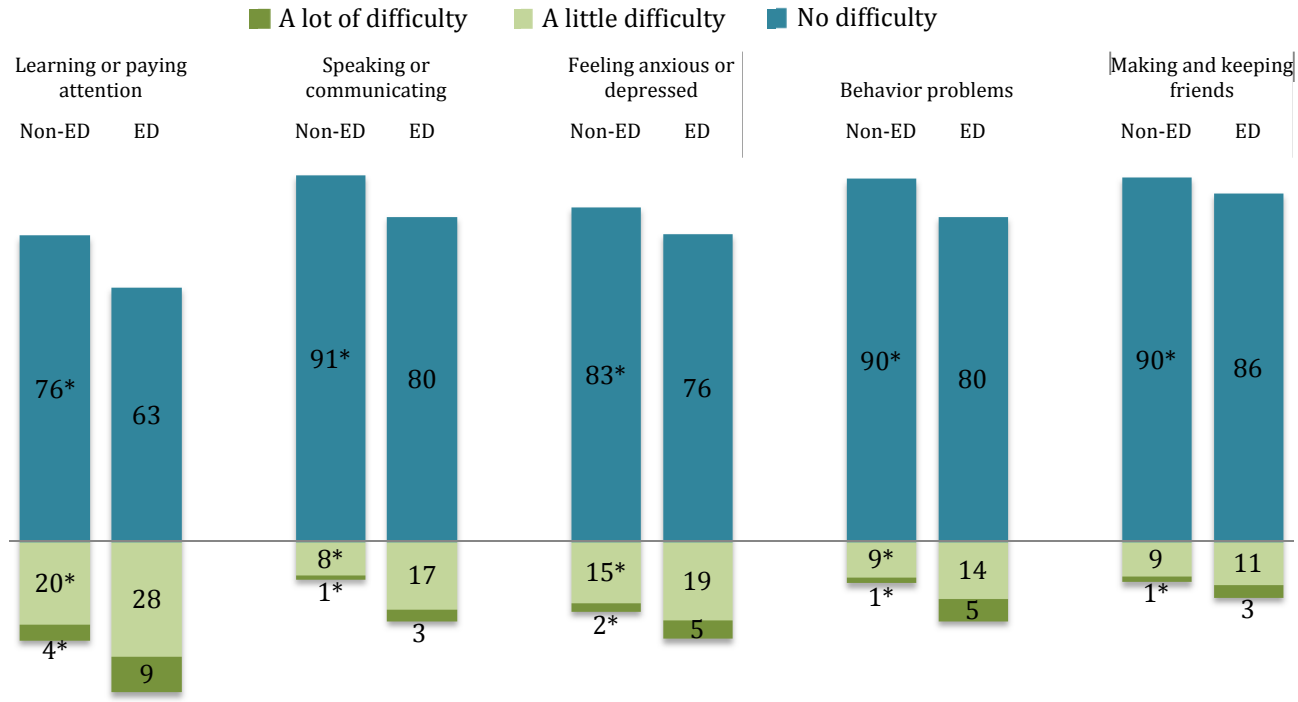
*Rationale:* Emotional, behavioral and mental health issues can impact the students' academic achievements, such as graduating from high school and college enrollment (24, 25). These issues can directly affect educational outcomes in a variety of ways. For example, a student's disruptive behavior may make it difficult to learn for him or herself, and may also create an environment in which it is difficult for their peers to learn (26, 27).

*Measures:* Two types of measures were used to examine children's mental, behavioral and emotional health. The first is parent reports of the student's ability to pay attention, student's difficulty in speaking or communicating, student's feelings of anxiety or depression, student's difficulty with behavior problems, and about student's ability in making and keeping friends. The second measure relates to parents being contacted by the school about child's behavior problems. Contact with the school about an issue provides the perception of the child's behavior from a non-parental perspective.

*Findings:* A higher percent of parents in economically disadvantaged families report that child has more emotional, behavioral or mental health difficulties than children from non-disadvantaged families. This is seen in the percent of parents reporting that their child has "a lot" or "a little" difficulty with learning or paying attention (24% vs 37%), speaking or communicating (9% vs 20%), feeling anxious or depressed (17% vs 24%), behavior problems (10% vs 19%), and keeping or making friends (10% vs 14%).

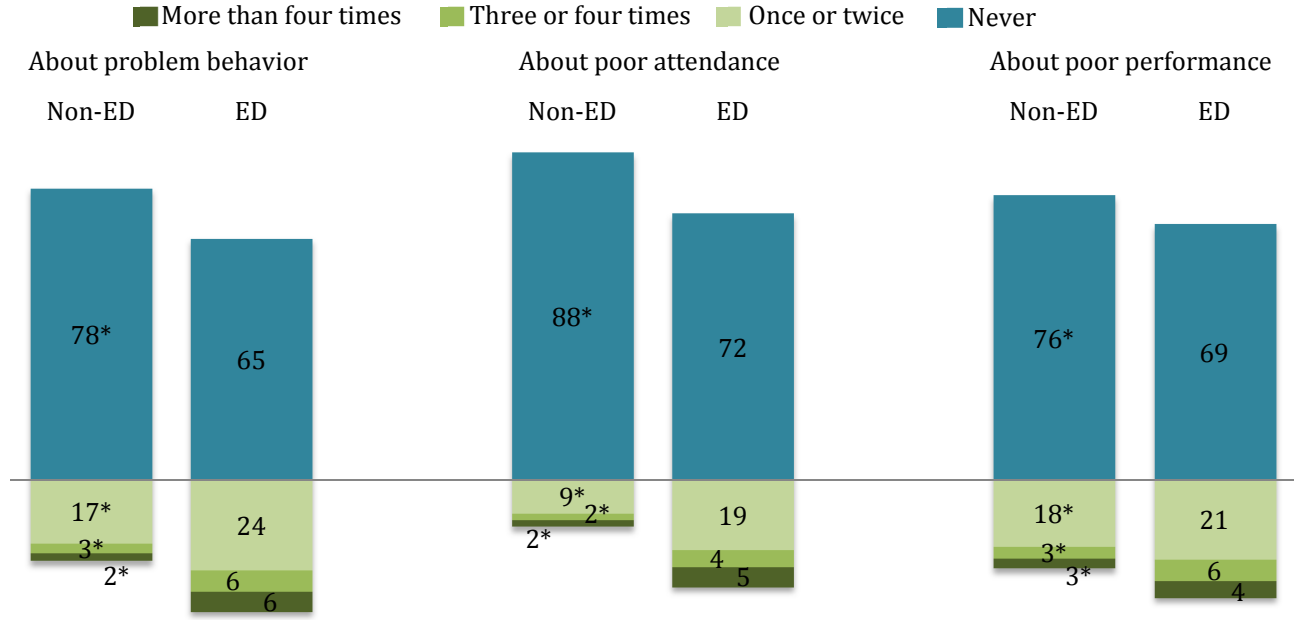
Relative to their counterparts, a higher percent of parents in economically disadvantaged families have been contacted at least once by the school about their child's behavior (35% vs 22%), attendance (12% vs 28%), and/or school performance (24% vs 31%).

Figure D.1 Parent reports "How much difficulty 9th grader has at school"




Note: * indicates the difference between economically disadvantaged and non-economically disadvantaged were statistically significantly different at p<=.05
Non-ED is non-economically disadvantaged. ED is economically disadvantaged.

Figure D.2 Parent report "How frequently were you contacted by the school?"




Note: * indicates the difference between economically disadvantaged and non-economically disadvantaged were statistically significantly different at p<=.05
Non-ED is non-economically disadvantaged. ED is economically disadvantaged.

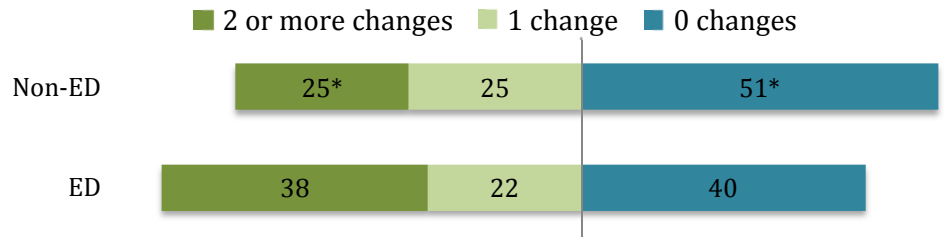
## E. Number of School Changes

*Rationale:* Youth who experience multiple school moves are at risk for poorer school outcomes (19, 28-30). When students change schools they need to recreate relationships with teachers, other school personnel and their classmates (31). Not only that, but curricula and teacher pedagogy can vary greatly between schools (32). These changes can take time for the student to adjust to and can impact the school environment for other students. For example, one study found that students who do not move, but who attend a school with a high number of students that do, are at a higher risk of dropping out (33). School mobility can also impact high school completion; a study of high school sophomores found that students who change schools two or more times have higher dropout rates (34).

*Measures:* Parents were asked to report the number of times their 9th grader has changed schools since kindergarten, not counting changes due to school progression.

*Findings:* A higher percent of students from economically disadvantaged families have changed schools relative to students from non-disadvantaged families (60% vs 50%) (See Figure D.1). Importantly, a higher percent of students from economically disadvantaged families experienced multiple school changes relative to their peers (38% vs 25%).

Figure E.1. Parent reports: "How often 9th grader has changed schools since kindergarten"




Note: * indicates the difference between economically disadvantaged and non-economically disadvantaged were statistically significantly different at p<=.05
Non-ED is non-economically disadvantaged. ED is economically disadvantaged.

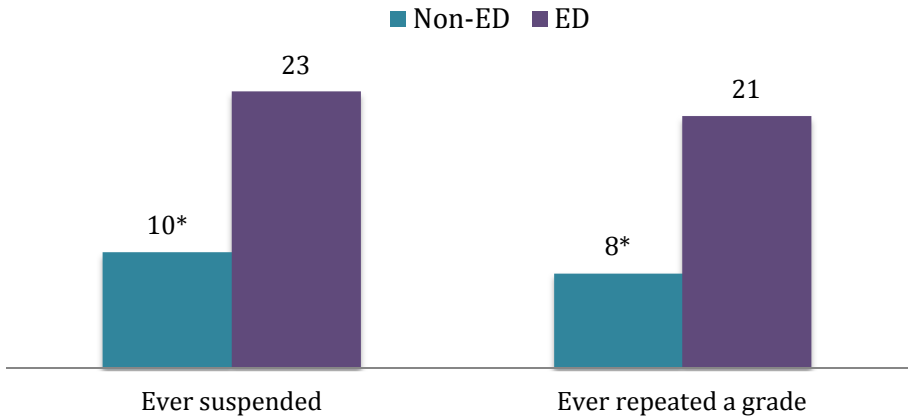
## F. School Experiences

*Rationale:* Two experiences that a youth may have in school that negatively impact academic achievement and graduating high school include being suspended and being retained in grade (19, 35). For example, one study found that the number of times a student was suspended in 6th grade was negatively associated with 7th and 8th grade reading and math scores and graduating high school on time (35). Grade retention has also been associated with committing disciplinary infractions (36), and a lower probability of graduating high school or enrolling in college (37).

*Measures:* Parents were asked whether their child had ever been suspended from school and whether since starting kindergarten, their child repeated any grades.

*Findings:* Relative to non-economically disadvantaged students, a higher percent of students from economically disadvantaged students had been suspended at least once (9% vs 23%); similarly a higher percent had repeated a grade (8% vs 21%).

Figure F.1 Parents Reports of Suspension and Grade Retention




Note: * indicates the difference between economically disadvantaged and non-economically disadvantaged were statistically significantly different at p<=.05
Non-ED is non-economically disadvantaged. ED is economically disadvantaged.

## Discussion

Meeting the 2020 goals for high school and college completion will require addressing the academic needs of the nearly 50% of public school youth who come from economically disadvantaged households. Students from economically disadvantaged households have a number of hurdles to overcome. These youth and their parents have lower expectations for their educational attainment. Economically disadvantaged students were less likely to believe that they could get into college and complete a bachelor's degree. Fortunately, effective school-based interventions exist for helping students improve their self-efficacy and motivation toward academics (38).

Given the number of life stresses (e.g. marital instability, residential instability, food insecurity) that are associated with family income, it is not surprising that students from economically disadvantaged families are at increased risk for emotional, behavioral, and mental health problems. According to parents, students had "a lot" or "a little difficulty" paying attention (37% vs 24%), speaking or communicating (19% vs 8%), feeling anxious or depressed (24% vs 17%), and with behavior problems (14% vs 10%).

To improve the educational attainment of economically disadvantaged youth, interventions that serve communities rather than single school systems are important. Children from economically disadvantaged families change schools more often. When children change schools they may lose access to services and connections with adults who are helping them. It is important to note that many of these school changes may be associated with moves that occur within the same county (39). Therefore, opportunities may exist within communities to improve the continuity of services for youth through systematic linkages, youth-centered planning and cross-agency information sharing. Improving the continuity of services may better meet youth's needs.

Students from economically disadvantaged families were also more likely to be suspended (22% vs 9%) and to be retained in grade (20% vs 8%). Factors that lead to suspension and grade retention are often directly attributable to factors caused by low family income (ex. poor behavior, poor attendance). Strategies that address the underlying causes that lead to suspension or grade retention may help mitigate this. For example, early warning assessments and monitoring of student behavior may help school intervene proactively and reduce the use of grad retention and school exclusion practices such as suspension (40, 41).

In conclusion, a large percent of children served by public schools come from economically disadvantaged families. Children in lower income families are at risk for dropping out of school, not going to college and struggling to make ends meet as an adult. Meeting the national 2020 education goals will require addressing the challenges faced by economically disadvantaged youth.

# Appendix A. Methods

The data for this analysis come from the High School Longitudinal Study of 2009 (HSLS:09), a nationally representative sample of students who attended ninth grade during the 2009-2010 school year. The data collection was sponsored by the National Center for Education Statistics (NCES) of the Institute of Education Sciences, the U.S. Department of Education and with additional support from the National Science Foundation. The data are representative of 10 states. Informants include the student self-reports, parents, math and science teachers, counselors and school principals. Over 20,000 students participated in the survey from 944 schools. The first step in the sampling process was to select the schools. Public and private schools that had both 9$^{th}$ and 11$^{th}$ grades were included in the sampling frame. On average, approximately 28 students per school were selected by a stratified systematic approach to complete the survey. All analyses in this report were weighted to account for the sampling design. Student weights were used for questions where the respondent was a student and parent weights were used for questions answered by parents.

Poverty status in the HSLS:09 is based on whether the sample member's family was at/above or below the 2008 poverty threshold established by the U.S. Census Bureau. http://www.census.gov/hhes/www/poverty/data/threshld/thresh08.html

The numbers shown in this report are estimates based on a survey that was designed using statistical principles to create a nationally representative sample. The scores for each measure are estimates – meaning the exact value is uncertain. To capture the extent of this uncertainty, we created 95% confidence intervals. For statistical purposes, two numbers are said to be statistically significantly different if their confidence intervals do not overlap. Tabulations excluded observations with missing values.

# Appendix B. Tables

| Table B.1 Regulatory Adjusted Cohort Graduation Rates 2010-2011, economically disadvantaged and non-disadvantaged, by state | | |
|---|---|---|
| | Economically Disadvantaged Rate | Non-Disadvantaged Rate |
| Alabama | 62% | 72% |
| Alaska | 56% | 68% |
| Arizona | 73% | 78% |
| Arkansas | 75% | 81% |
| California | 70% | 76% |
| Colorado | 62% | 74% |
| Connecticut | 62% | 83% |
| Delaware | 71% | 78% |
| District of Columbia | 58% | 59% |
| Florida | 60% | 71% |
| Georgia | 59% | 67% |
| Hawaii | 75% | 80% |
| Idaho | - | - |
| Illinois | 75% | 84% |
| Indiana | 79% | 86% |
| Iowa | 78% | 88% |
| Kansas | 73% | 83% |
| Kentucky | - | - |
| Louisiana | 64% | 71% |
| Maine | 73% | 84% |
| Maryland | 74% | 83% |
| Massachusetts | 70% | 83% |
| Michigan | 63% | 74% |
| Minnesota | 58% | 77% |
| Mississippi | 69% | 75% |
| Missouri | 74% | 81% |
| Montana | 71% | 82% |
| Nebraska | 78% | 86% |
| Nevada | 53% | 62% |
| New Hampshire | 72% | 86% |
| New Jersey | 71% | 83% |
| New Mexico | 56% | 63% |
| New York | 69% | 77% |
| North Carolina | 71% | 78% |
| North Dakota | 76% | 86% |
| Ohio | 65% | 80% |
| Oklahoma | - | - |
| Oregon | 61% | 68% |
| Pennsylvania | 71% | 83% |
| Rhode Island | 66% | 77% |
| South Carolina | 67% | 74% |
| South Dakota | 86% | 83% |
| Tennessee | 80% | 86% |
| Texas | 84% | 86% |
| Utah | 65% | 76% |
| Vermont | 77% | 87% |
| Virginia | 70% | 82% |
| Washington | 66% | 76% |
| West Virginia | 68% | 76% |
| Wisconsin | 74% | 87% |
| Wyoming | 66% | 80% |

| Table B.2 Percent economically disadvantaged, by state | |
|---|---|
| | % Economically Disadvantaged |
| Alabama | 53% |
| Alaska | 38% |
| Arizona | 45% |
| Arkansas | 60% |
| California | 53% |
| Colorado | 40% |
| Connecticut | 34% |
| Delaware | 48% |
| District of Columbia | 73% |
| Florida | 56% |
| Georgia | 57% |
| Hawaii | 47% |
| Idaho | 45% |
| Illinois | 44% |
| Indiana | 46% |
| Iowa | 38% |
| Kansas | 47% |
| Kentucky | 57% |
| Louisiana | 66% |
| Maine | 42% |
| Maryland | 40% |
| Massachusetts | 34% |
| Michigan | 45% |
| Minnesota | 37% |
| Mississippi | 70% |
| Missouri | 44% |
| Montana | 41% |
| Nebraska | 43% |
| Nevada | 50% |
| New Hampshire | 25% |
| New Jersey | 32% |
| New Mexico | 67% |
| New York | 48% |
| North Carolina | 50% |
| North Dakota | 31% |
| Ohio | 42% |
| Oklahoma | 60% |
| Oregon | 49% |
| Pennsylvania | 38% |
| Rhode Island | 43% |
| South Carolina | 54% |
| South Dakota | 37% |
| Tennessee | 55% |
| Texas | 50% |
| Utah | 38% |
| Vermont | 32% |
| Virginia | 37% |
| Washington | 40% |
| West Virginia | 51% |
| Wisconsin | 39% |
| Wyoming | 37% |

| Table B. A.1 9th Graders beliefs about the probability of graduating high school | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Very sure about graduating | 95% CI | Will probably graduate | 95% CI | Will probably not graduate | 95% CI | Very sure about not graduating | 95% CI | χ2 p-value |
| Non-ED (n=10,731) | 89.9 | 89.0-90.8 | 9.4 | 8.5-10.3 | 0.6 | 0.4-0.8 | 0.1 | 0.1-0.2 | 0.000 |
| ED(n=5,286) | 77.7 | 75.6-79.7 | 20.0 | 18.2-22.0 | 1.6 | 1.0-2.3 | 0.7 | 0.4-1.4 | |
| Total (n=16,017) | 85.2 | 84.0-86.3 | 13.5 | 12.5-14.6 | 1.0 | 0.7-1.3 | 0.4 | 0.2-0.6 | |

| Table B. A.2 9th Grade student and parental expectations for educational attainment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | HS or less | 95% CI | Associates | 95% CI | College | 95% CI | Don't know | 95% CI | χ2 p-value |
| Students | | | | | | | | | |
| Non-ED (n=10,865) | 7.9 | 7.2-8.7 | 5.6 | 5.0-6.3 | 67 | 65.4-68.2 | 20 | 18.5-20.8 | 0.000 |
| ED(n=5,337) | 21 | 19.1-23.2 | 8.3 | 7.3-9.5 | 49 | 45.9-51.0 | 22 | 20.6-23.7 | |
| Total (n=16,202) | 13.0 | 12.0-14.1 | 6.7 | 6.1-7.3 | 60 | 58.1-61.3 | 21 | 19.7-21.6 | |
| Parents | | | | | | | | | |
| Non-ED (n=7,894) | 6.1 | 5.4-6.9 | 10 | 8.9-11.7 | 74.0 | 72.2-75.7 | 9.7 | 8.8-10.8 | 0.000 |
| ED(n=3,971) | 20 | 17.1-22.1 | 13 | 11.5-15.2 | 46 | 42.5-48.9 | 22 | 19.5-23.9 | |
| Total (n=11,865) | 11 | 10.1-12.5 | 11 | 10.4-12.5 | 63 | 61.1-65.1 | 14 | 13.2-15.5 | |

| Table B. B.1 9th Grader beliefs about getting into college | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Strongly agree | 95% CI | Agree | 95% CI | Disagree | 95% CI | Strongly disagree | 95% CI | χ2 p-value |
| Even if I study, I won't get into college | | | | | | | | | |
| Non-ED (n=10,801) | 1.0 | 0.8-1.3 | 5.0 | 4.3-5.7 | 50.2 | 48.6-51.7 | 43.8 | 42.5-45.2 | 0.000 |
| ED(n=5,308) | 2.9 | 2.3-3.8 | 10.8 | 9.1-12.7 | 49.9 | 46.7-53.1 | 36.4 | 33.2-39.7 | |
| Total (n=16,109) | 1.8 | 1.5-2.2 | 7.2 | 6.5-8.1 | 50.1 | 48.3-51.8 | 40.9 | 39.3-42.6 | |

| Table B. B.2 9th Graders beliefs about the probability of completing a bachelor's degree | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Definitely | 95% CI | Probably | 95% CI | Probably not | 95% CI | Definitely not | 95% CI | χ2 p-value |
| Non-ED (n=10,791) | 55.1 | 53.6-56.7 | 39.1 | 37.6-40.6 | 4.7 | 4.1-5.3 | 1.1 | 0.9-1.5 | 0.000 |
| ED(n=5,300) | 39.9 | 37.5-42.3 | 48.3 | 46.0-50.5 | 9.8 | 8.6-11.2 | 2.0 | 1.5-2.7 | |
| Total (n=16,091) | 49.2 | 47.8-50.6 | 42.7 | 41.4-43.9 | 6.7 | 6.0-7.4 | 1.5 | 1.2-1.8 | |

| Table B. C.1 9th Grader beliefs about the value of school | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Strongly agree | 95% CI | Agree | 95% CI | Disagree | 95% CI | Strongly disagree | 95% CI | χ2 p-value |
| Getting good grades is important | | | | | | | | | |
| Non-ED (n=10,831) | 61.0 | 59.5-62.5 | 35.8 | 34.4-37.4 | 2.6 | 2.2-3.0 | 0.6 | 0.4-0.8 | 0.001 |
| ED (n=5,338) | 56.9 | 54.4-59.4 | 38.3 | 35.8-40.9 | 3.7 | 2.8-4.8 | 1.1 | 0.8-1.7 | |
| Total (n=16,169) | 59.4 | 57.9-60.9 | 36.8 | 35.3-38.3 | 3.0 | 2.6-3.5 | 0.8 | 0.6-1.0 | |
| School is a waste of time | | | | | | | | | |
| Non-ED (n=10,794) | 3.5 | 3.1-4.0 | 12.6 | 11.6-13.6 | 53.2 | 51.7-54.6 | 30.8 | 29.3-32.2 | 0.004 |
| ED (n=5,318) | 4.7 | 3.7-5.9 | 13.7 | 12.2-15.5 | 48.2 | 45.7-50.7 | 33.4 | 31.0-35.9 | |
| Total (n=16,112) | 4.0 | 3.5-4.5 | 13.0 | 12.2-13.9 | 51.2 | 50.0-52.5 | 31.8 | 30.4-33.2 | |
| Studying in school rarely pays off later with good job | | | | | | | | | |
| Non-ED (n=10,823) | 6.1 | 5.6-6.7 | 11.8 | 11.0-12.7 | 44.3 | 42.9-45.8 | 37.7 | 36.3-39.3 | 0.000 |
| ED(n=5,316) | 12.7 | 11.1-14.5 | 22.0 | 19.4-24.5 | 38.3 | 35.9-40.8 | 27.0 | 24.8-29.4 | |
| Total (n=16,139) | 8.7 | 7.9-9.5 | 15.8 | 14.6-17.0 | 42.0 | 40.6-43.4 | 33.6 | 32.2-35.0 | |

| Table B. D.1 9th Grader difficulties at school, reported by parents | | | | | | | |
|---|---|---|---|---|---|---|---|
| | No difficulty | 95% CI | A little difficulty | 95% CI | A lot of difficulty | 95% CI | χ2 p-value |
| Difficulty learning or paying attention | | | | | | | |
| Non-ED (n=10,287) | 75.8 | 74.4-77.1 | 20.4 | 19.1-21.7 | 3.9 | 3.3-4.4 | |
| ED(n=4,928) | 62.9 | 60.5-65.3 | 28.4 | 26.5-30.4 | 8.7 | 7.2-10.4 | 0.000 |
| Total (n=15,215) | 70.8 | 69.4-72.2 | 23.5 | 22.4-24.6 | 5.7 | 5.1-6.4 | |
| Difficulty speaking or communicating | | | | | | | |
| Non-ED (n=10,280) | 90.7 | 89.6-91.7 | 8.4 | 7.4-9.5 | 0.9 | 0.7-1.2 | |
| ED(n=4,941) | 80.4 | 78.0-82.7 | 16.6 | 14.5-19.0 | 3 | 2.2-3.9 | 0.000 |
| Total (n=15,221) | 86.7 | 85.5-87.9 | 11.6 | 10.4-12.8 | 1.7 | 1.4-2.1 | |
| Difficulty feeling anxious or depressed | | | | | | | |
| Non-ED (n=10,248) | 82.7 | 81.6-83.7 | 15.1 | 14.2-16.2 | 2.1 | 1.7-2.7 | |
| ED(n=4,924) | 76.1 | 73.5-78.5 | 19.3 | 17.6-21.2 | 4.6 | 3.4-6.3 | 0.000 |
| Total (n=15,172) | 80.1 | 78.9-81.3 | 16.8 | 15.8-17.7 | 3.1 | 2.5-3.8 | |
| Difficulty with behavior problems | | | | | | | |
| Non-ED (n=10,277) | 89.8 | 88.8-90.8 | 8.8 | 7.8-9.8 | 1.4 | 1.1-1.8 | |
| ED(n=4,944) | 80.4 | 78.8-81.8 | 14.2 | 12.5-16.1 | 5.4 | 4.4-6.7 | 0.000 |
| Total (n=15,221) | 86.2 | 85.2-87.1 | 10.9 | 10.0-11.8 | 3 | 2.5-3.6 | |
| Difficulty making and keeping friends | | | | | | | |
| Non-ED (n=10,281) | 90.1 | 89.0-91.1 | 8.6 | 7.6-9.6 | 1.4 | 1.1-1.7 | |
| ED(n=4,926) | 86.2 | 84.1-88.1 | 10.6 | 9.0-12.4 | 3.2 | 2.4-4.3 | 0.000 |
| Total (n=15,207) | 88.6 | 87.5-89.6 | 9.3 | 8.5-10.3 | 2.1 | 1.7-2.5 | |

| Table B. D.2 How often parents are contacted by the school | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Never | 95% CI | Once or twice | 95% CI | Three or four times | 95% CI | More than four times | 95% CI | χ2 p-value |
| About problem behavior | | | | | | | | | |
| Non-ED (n=10,286) | 78.3 | 76.8-79.8 | 16.9 | 15.8-18.1 | 2.6 | 2.2-3.2 | 2.1 | 1.7-2.6 | |
| ED(n=4,927) | 64.8 | 62.7-66.9 | 24.2 | 22.4-26.0 | 5.5 | 4.3-6.9 | 5.5 | 4.4-6.8 | 0.000 |
| Total (n=15,213) | 73.1 | 71.8-74.4 | 19.7 | 18.7-20.8 | 3.7 | 3.2-4.4 | 3.4 | 2.9-4.0 | |
| About poor attendance | | | | | | | | | |
| Non-ED (n=10,263) | 87.8 | 86.6-88.9 | 8.8 | 7.7-10.0 | 1.8 | 1.4-2.3 | 1.7 | 1.3-2.0 | |
| ED(n=4,912) | 71.5 | 68.5-74.2 | 18.7 | 16.6-21.1 | 4.4 | 3.4-5.6 | 5.4 | 4.5-6.6 | 0.000 |
| Total (n=15,175) | 81.5 | 80.3-82.7 | 12.6 | 11.7-13.6 | 2.8 | 2.3-3.3 | 3.1 | 2.7-3.6 | |
| About poor performance | | | | | | | | | |
| Non-ED (n=10,259) | 76.4 | 74.9-77.8 | 17.8 | 16.5-19.1 | 3.2 | 2.7-3.8 | 2.6 | 2.2-3.2 | |
| ED(n=4,898) | 68.6 | 66.1-71.1 | 21.2 | 19.2-23.3 | 5.8 | 4.7-7.2 | 4.4 | 3.4-5.7 | 0.000 |
| Total (n=15,157) | 73.4 | 72.1-74.7 | 19.1 | 18.1-20.2 | 4.2 | 3.7-4.8 | 3.3 | 2.8-3.9 | |

| Table B. E.1 How often 9th grader has changed schools | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 0 changes | 95% CI | 1 change | 95% CI | 2 or more changes | 95% CI | χ2 p-value |
| Non-ED (n=10,423) | 50.7 | 48.9-52.5 | 24.6 | 23.2-26.0 | 24.7 | 23.2-26.3 | |
| ED(n=4,988) | 40.3 | 37.7-43.0 | 21.9 | 19.6-24.4 | 37.8 | 35.0-40.6 | 0.000 |
| Total (n=15,411) | 46.7 | 45.1-48.3 | 23.6 | 22.2-25.0 | 29.7 | 28.1-31.4 | |

| Table B. F.1 Students experiences in school reported by parents | | | |
|---|---|---|---|
| | Ever | 95% CI | χ2 p-value |
| Suspended | | | |
| Non-ED (n=10,434) | 9.5 | 8.5-10.6 | |
| ED(n=5,013) | 22.6 | 20.5-24.8 | 0.000 |
| Total (n=15,447) | 14.6 | 13.5-15.7 | |
| Repeated a grade | | | |
| Non-ED (n=10,449) | 7.8 | 6.9-8.8 | |
| ED(n=5,031) | 20.6 | 18.7-22.7 | 0.000 |
| Total (n=15,480) | 12.8 | 11.7-13.9 | |

# References


1. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. 2011. National Assessment of Educational Progress (NAEP). http://nces.ed.gov/nationsreportcard/about/naeptools.asp.
2. ED Data Express. 2011. Regulatory Adjusted Cohort Graduation Rate, Low Income: 2010-11. http://www.eddataexpress.ed.gov/data-element-explorer.cfm.
3. Aud S, Hussar W, Johnson F, Kena G, Roth E, Manning E, et al. The Condition of Education 2012. Washington, DC; 2012.
4. Reardon SF. The Widening Academic Achievement Gap Between the Rich and the Poor: New Evidence and Possible Explanations. In; 2011.
5. DeNavas-Walt C, Proctor BD, Smith JC. Income, Poverty, and Health Insurance Coverage in the United States: 2011. Current Population Reports; 2012.
6. Tribiano JJ. Child Nutrition Programs- Income Eligibility Guidelines. Federal Register 2012;77(57):17004-17006.
7. Neild RC. Falling off track during the transition to high school: What we know and what can be done. Future of Children 2009;19(1):53-76.
8. Neild RC, Stoner-Eby S, Furstenberg F. Connecting entrance and departure: The transition to ninth grade and high school dropout. Education and Urban Society 2008;40(5):543-569.
9. Edin K, Kissane RJ. Poverty and the American Family: A Decade in Review. Journal of Marriage and Family 2010;72(3):460-479.
10. Evans GW, English K. The environment of poverty: multiple stressor exposure, psychophysiological stress, and socioemotional adjustment. Child development 2002;73(4):1238-48.
11. Ladd HF. Presidential Address : Education and Poverty : Confronting the Evidence. Journal of Policy Analysis and Management 2012;31(2):203-227.
12. Duncan GJ, Murnane RJ. Introducation: The American Dream, Then and Now. In: Duncan GJ, Murnane RJ, editors.; 2011.
13. Balfanz R, Bridgeland JM, Bruce M, Fox JH. Building a Grad Nation: progress and challenge in ending the high school dropout epidemic. Washington DC: Civic Enterprises, Everyone Graduates Center at Johns Hopkins University, America's Promise Alliance, Alliance for Excellent Education; 2012.
14. The White House. 2011. Race to the Top High School Commencement Challenge. http://www.whitehouse.gov/issues/education/k-12/commencement-challenge. Accessed January 4, 2012
15. OECD. Education at a Glance 2011: OECD Indicators: OECD Publishing; 2011. Report No.: 9789264114203.
16. Eccles JS, Wigfield A. Motivational beliefs, values, and goals. Annual review of psychology 2002;53:109-32.
17. Hao L, Bonstead-bruns M. Parent-Child Differences in Educational Expectations and the Academic Achievement of Immigrant and Native Students. Sociology of Education 1998;71(3):175-198.

18. Wells RS, Seifert Ta, Padgett RD, Park S, Umbach PD. Why Do More Women than Men Want to Earn a Four-Year Degree?: Exploring the Effects of Gender, Social Origin, and Social Capital on Educational Expectations. The Journal of Higher Education 2011;82(1):1-32.
19. Ou S-R, Reynolds AJ. Predictors of educational attainment in the Chicago Longitudinal Study. School Pscyhology Quarterly 2008;23(2):199-229.
20. Schunk DH. Self-efficacy and academic motivation. Educational Psychologist 1991;26(3&4):207-231.
21. Pajares F. Self-Efficacy Beliefs in Academic Settings. Review of Educational Research 1996;66(4):543-578.
22. Davis LE, Ajzen I, Saunders J, Williams T. The decision of African American students to complete high school: An application of the theory of planned behavior. Journal of Educational Psychology 2002;94(4):810-819.
23. Frymier AB, Shulman GM. "What's in it for me?": Increasing content relevance to enhance students' motivation. Communication Education 1995.
24. McLeod JD, Kaiser K. Childhood Emotional and Behavioral Problems and Educational Attainment. American Sociological Review 2004;69(5):636-658.
25. Nelson JR, Benner GJ, Lane K, Smith BW. Academic Achievement ofK-12 Students With Emotional and Behavioral Disorders. Exceptional Children 2004;7(1):59-73.
26. Benson PL, Scales PC, Leffert N, Roehlkepartain EC. A Fragile Foundation: The State of Developmental Assets among American Youth: ERIC; 1999.
27. Greenberg MT, Weissberg RP, O'Brien MU, Zins JE, Fredericks L, Resnik H, et al. Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. American Psychologist 2003;58(6-7):466-474.
28. Rumberger RW, Larson KA. Student Mobility and the Increased Risk of High School Dropout. American Journal of Education 1998;107(1):1-35.
29. Temple JA, Reynolds AJ. School Mobility and Achievement : Longitudinal Findings From an Urban Cohort. Journal of school Psychology 1999;37(4):355-377.
30. Swanson CB, Schneider B. Students on the Move : Residential and Educational Mobility in America's Schools. Sociology of Education 1999;72(1):54-67.
31. Pribesh S, Downey DB. Why are residential and school moves associated with poor school performance? Demography 1999;36(4):521-34.
32. Mehana M, Reynolds AJ. School mobility and achievement: a meta-analysis. Children and Youth Services Review 2004;26(1):93-119.
33. South SJ, Haynie DL, Bose S. Student mobility and school dropout. Social Science Research 2007;36(1):68-94.
34. Dalton B, Glennie E, Ingels SJ, Wirt J. Late High School Dropouts: Characteristics, Experiences, and Changes Across Cohorts; 2009.
35. Mendez LM. Predictors of suspension and negative school outcomes: a longitudinal investigation. New directions for youth development 2003(99):17-33.
36. Cook PJ, MacCoun R, Muschkin C, Vigdor J. The Negative Impacts of Starting Middle School in Sixth Grade. Journal of Policy Analysis and Management 2008;27(1):104-121.
37. Goldenring Fine J, Davis JM. Grade retention and enrollment in post-secondary education. Journal of School Psychology 2003;41(6):401-411.

38. Wigfield A, Wentzel KR. Introduction to Motivation at School : Interventions That Work Introduction to Motivation at School : Interventions That Work. Educational Psychologist 2007;42(4):191-196.
39. U.S. Census Bureau. 2012. Geographical Mobility: 2011 to 2012. http://www.census.gov/hhes/migration/data/cps/cps2012.html. Accessed January 8, 2013
40. Protheroe N. Alternatives to Retention in Grade. Principal 2007(February):30-34.
41. Peterson RL. Ten Alternatives to Suspension. Impact 2005;18(2).