

# Working Papers

**Examining Minority and Poor Youth's College Aspirations and Expectations:  
The Potential Role of College Savings**

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## Center for Social Development



George Warren Brown School of Social Work

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**Abstract**

**Examining Minority and Poor Youth's College Aspirations and Expectations: The Potential Role of College Savings**

In this study, the following three questions are examined: (1) Is having savings for college associated with higher college expectations? (2) Are college expectations associated with math achievement? and (3) Do college expectations act as a mediator for college aspirations? Findings indicate that youth with college savings are more likely to have higher college expectations and having higher college expectations is associated with math achievement. Further, college expectations act as a mediator for college aspirations. These findings suggest that policies designed to promote youth college savings may have a positive impact on college expectations.

## **Examining Minority and Poor Youth's College Aspirations and Expectations: The Potential Role of College Savings**

### **Potential Role of College Savings**

In describing the importance of receiving a college education for achieving the American dream, in the perceptions of many Americans, Elfin (p. 288) says,<sup>1</sup>

Of all the truths that this generation of Americans holds self-evident, few are more deeply embedded in the national psyche than the maxim "It pays to go to college." Since the GI Bill transformed higher education in the aftermath of World War II, a college diploma, once a birthright of the leisured few, has become a lodestone for the upwardly mobile, as integral to the American dream as the pursuit of happiness itself. (p. 1)

With these words Michael Elfin asserts the importance of a college education. For many poor and minority Americans, in particular, whether or not they are able to obtain a college education represents the difference between remaining on the path of continued poverty or gaining access to the path to prosperity.

#### *Prosperity versus Poverty*

One of the most compelling reasons for why people want to go to college, according to Day and Newburger (2002, p. 7) is, "... the expectation of future economic success" that obtaining a college degree brings (p. 1). It appears that as early as kindergarten children may begin to make the connection between schooling and future economic success. For example, Sherman (1997) finds in a study of five year-olds, that children understand school is necessary for future success in the labor market. Cook and colleagues (1996) find that second graders in their sample of 220 second, fourth, sixth, and

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<sup>1</sup> In this paper, the term "college" is used as shorthand to refer to all post secondary training and higher education resulting in some kind of certification or degree that reasonably can be assumed to lead to improved economic and social opportunities.

eight grade students believe that additional schooling leads to better occupational outcomes.

Further, Americans not only recognize the economic benefits of a college education at an early age, they want to go to college and value receiving an education as a way of reaching the American dream. According to the Advisory Committee on Student Financial Assistance (ACCSFA), a group charged by Congress with enhancing access to postsecondary education for low-income students, 94 percent of U.S. high school students aspire to go to college regardless of race or income level (2002). In addition, most parents (96%) want their child to attend college (Horn, Chen, & Chapman, 2003). Miller (1997) reports that the 1996 Gallup Poll showed that 92% of parents regard a college education as the most important investment they can make for their children. For most Americans, it appears that they both want to go to college and value going to college as a way to achieve the American dream for them and their children.

In addition to the belief that receiving a college education is a path to future economic prosperity, there is empirical evidence that a college education does indeed lead to higher income. According to U.S. Census Bureau data, adults age 18 and older with a bachelor's degree earn on average \$22,909 more per year than adults with a high school diploma, and \$32,385 more than adults without a high school diploma (Bergman, 2006). Further, adults with advanced degrees earn on average \$26,539 more than adults with a four-year degree, \$49,448 more than adults with a high school diploma, and \$58,924 more than adults without a high school diploma (Bergman, 2006). What these figures suggest, is that the perception that education is an important pathway to prosperity is founded in realities; that is, it is not simply wishful thinking. If it is true that

low income students and their parents believe college is important and it truly is important, then why does attending college remain a genuinely desired but elusive goal for many poor and minority youth in America?

One explanation for lower educational attainment among some groups may be a result of lower rewards for the same degree. For example, over his life time, a man with a four-year degree will earn approximately one million dollars more than a man with a high school education (Day & Newburger, 2002). In contrast, a woman with a four-year degree will earn approximately a half million dollars more than a woman with a high school education, approximately half of what a man with similar educational attainment will earn (Day & Newburger, 2002). Due to what might be thought of as institutional inequalities, while women with a degree are better off, than without degrees, relative to men they receive less benefit from the same investment of effort and ability in obtaining a college degree. Blacks and Hispanics fare similarly to women in comparison to white males (Day & Newburger, 2002). Both Blacks and Hispanics with a four-year degree will earn on average one point seven million dollars over their work life compared to the two point two million dollars that white males can expect to earn during their work life (Day & Newburger, 2002). Despite the diminished benefits for women, the poor, and minority youth, obtaining a college education still pays off over the course of their lives, compared to those who do not complete a college degree (Day & Newburger, 2002).

If receiving a college education provides poor and minority youth with a real opportunity to embark upon a pathway that leads to a higher level of economic prosperity than they might be able to obtain otherwise, why do so many of them still fail to attend a four-year college? For example, among high school graduates ages 18 to 24, only 35

percent of Latinos, 41 percent of blacks, and 47 percent of whites enroll in college (U.S. Department of Education, 2006). Although the path to college remains a desired and valued way of achieving the American dream, it appears that for many poor and minority youth, they perceive themselves as being cut-off from accessing a college education (ACSFA, 2002).

Although there are several factors that affect college entrance, the high cost of college is a key reason why many poor and minority youth “judge four-year colleges to be out of their reach” (ACSFA, 2002, p. 21). Families who lack access to financial resources are less likely to pursue higher education (Perna, 2000). The cost of higher education is daunting even to middle-income families: average annual costs of a public college or university in 2006-07 was \$5,836 for a private college or university it was \$22,218 (Baum & Payea, 2006). These figures rise every year and do not include room and board. With room and board included, the cost on average of college jumps to \$12,796 for a public college or university and \$30,367 for a private college or university (Baum & Payea, 2006). To meet these financial demands, most families must look beyond income streams (Conley, 1999).

To pay for college, middle- and upper-income families increasingly turn to tax-preferred college saving plans such as 529 savings plans (College Board, 2005). Assets in 529s accumulate tax free and if used for college expenses, can be redeemed tax free (Clancy, Orszag, & Sherraden, 2004). Total assets held in 529s grew from \$2.4 billion in 1996 to \$72.3 billion in 2005. However, 529s do not typically benefit low-income families, “... since they have little or no tax liability, they cannot receive a tax benefit” (Clancy et al., 2004, p. 5).



## Examining Minority and Poor Youth's College Aspirations and Expectations

Children development accounts have been introduced as a possible approach to help poor families save and accumulate financial assets for college (see for e.g., Boshara, 2001). Governor (then Senator) Corzine and Senator Santorum introduced a bipartisan proposal for a children's saving policy called the America Saving for Personal Investment, Retirement, and Education Act (ASPIRE, 2004). The ASPIRE Act would create "KIDS Accounts," or a savings account for every newborn, with an initial \$500 deposit, along with opportunities for financial education.<sup>2</sup> Children living in households with incomes below the national median would be eligible for both a supplemental contribution of up to \$500 at birth and a savings incentive of \$500 per year in matching funds for amounts saved in the account. Withdrawals would be allowed when the account holder turns 18. Tax-free withdrawals could be made to pay for post-secondary education, first-time home purchase, or retirement security. With this proposal, children's development accounts (CDAs) have been placed on the U.S. policy agenda, joining other countries, such as the United Kingdom, whose Children's Trust Fund established in 2005 is the model for the ASPIRE Act.

Americans, by and large, believe that a college education is for personal gain, and therefore, individuals should shoulder the bulk of the burden for paying for college (Gertner, 2006). Therefore, one of the advantages of CDAs over, for example, scholarships and financial aid, is that CDAs are consistent with American ideals (Sherraden, 1991). Furthermore, the process of saving for college may have a large influence on the development of expectations among children and their parents

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<sup>2</sup> At this writing, the ASPIRE Act remains on the Congressional agenda (<http://www.assetbuilding.org/AssetBuilding/index.cfm?pg=docs&SecID=102&more=yess&DocID=1246>).

(Sherraden, 1991)<sup>3</sup> that scholarships and financial aid cannot have. Educational scholarships are, for the most part, not guaranteed. Moreover they are not awarded until children are in the last year of high school. Prior to receiving a scholarship, children cannot count on them in the same way they can count on money in the bank nor can they benefit from watching their college savings grow. Turning to college loans, there are a number of studies that have documented negative effects they have on youth's expectations for college as a result of increased debt (see for e.g., ACSFA, 2002; Gertner, 2006). However, more research has to be done on the potential effects of children savings accounts on children's college expectations. Up until now, traditional models for predicting college expectations have ignored children's savings accounts.

*Predicting Prosperity versus Poverty, Traditional Explanations*

College expectations (or the level of educational attainment one expects to achieve) have been cited as one of the most significant determinants of educational attainment (Marjoribanks, 1984). Among the factors used to predict college expectations are ethnicity (Hanson, 1994), gender (Averett & Burton, 1996), family income (Reynolds & Pemberton, 2001), academic self-efficacy (Kerpelman & Mosher, 2004; Mau & Bikos, 2000), school quality (Roscigno & Ainsworth-Darnell, 1999), parent engagement (Wilson & Wilson, 1992), employment status (Roscigno & Ainsworth-Darnell, 1999), family size (Reynolds & Pemberton, 2001), peer expectations (Reynolds & Pemberton, 2001), self-concept (Mau & Bikos, 2000), academic achievement (Mau, 1995), and parent education (Wilson & Wilson, 1992).

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<sup>3</sup> Sherraden (1991) claims that assets have multiple effects: (1) improve household stability; (2) create an orientation toward the future; (3) stimulate development of other assets; (4) enable focus and specialization; (5) provide a foundation for risk taking; (6)

Reynolds and Pemberton (2001) use data from the National Longitudinal Survey of Youth (1979 & 1997) to analyze factors that influence children's college expectation, including family structure, family income, and local labor market characteristics. Controlling for age, gender, race, and ethnicity, they find that a significant portion (80%) of the variance in college expectations cannot be explained using these typical factors (Reynolds & Pemberton, 2001). This suggests that further theoretical and empirical specification is necessary if social scientists are to understand how college expectations are formed.

Whether including college savings improves the predictive power of the traditional model for predicting college expectations is analyzed in this study. Next, the role of college expectations in math achievement is tested to see if expectations are associated with actual academic achievement. Finally, whether college expectations act as a complete mediator for college aspirations in relation to academic achievement is examined. This is an important question because if expectations are more important for predicting academic behavior than aspirations, then prosperity versus poverty might be as much about access to institutions as it is attitude.

In this study, aspirations are what people desire, while expectations are what people believe they can actually achieve (Reynolds & Pemberton, 2001). Expectations are based on people's perceptions of reality. Reynolds and Pemberton (2001) define college expectations as, "... individual's subjective probabilities that an event, such as receiving a college degree, will occur sometime in the future given available information and preferences at the present time" (p. 704). College savings increases a child's

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increase personal efficacy; (7) increase social influence; (8) increase political

expectations for attending college by bringing the financing of college under her control, augmenting her ability to attend college (Elliott & Sherraden, 2007).

While it is beyond the scope of this paper to explain how college expectations are formed, Elliott and Sherraden (2007) suggest that college expectations are a form of cognitive expectation. Individuals develop cognitive expectations based on their lived experiences. In the case of some people who grow up poor or in a minority group they internalize the failures of institutions to provide equal access. In other words, they develop negative college expectations.

Therefore, changes in their institutional structure should result in changes in expectations so long as the changes are consistent with one's perception of reality (Elliott & Sherraden, 2007; Reynolds & Pemberton, 2001). This suggests that in cases where aspirations are high, expectations might be less about changing attitudes than about institutional changes. Further, it suggests that when college expectations are considered, aspirations add little to models for explaining academic achievement among youth.

### **Sample**

#### *Data*

This study uses 2002 data from the Panel Study of Income Dynamics (PSID) and the Child Development Supplement (CDS) to the PSID. The PSID is a nationally representative longitudinal survey of U.S. individuals and families that began in 1968. Data on employment, income, and marital situation have been collected annually with questions on wealth added beginning in 1984. In 1997, a supplement was drawn from PSID interviews to collect a wide range of data on parents and their young children ages birth to 12 years.

In the 1997 sample, there are 3,563 children. The numbers are fairly evenly distributed across all ages. There are 1,642 white children and 1,455 black children.

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participation; and (9) enhance the welfare of offspring.

There are also Hispanics, Asians, Native Americans, and “other” in the sample, but the counts are much smaller. Because the PSID initially over-sampled low-income families, there are a greater number of blacks than would be expected in the US population. In some cases, data were collected on more than one child per household, but the maximum number of interviews per household was limited to two children. Whenever there were three or more eligible children less than age 13 in a household, two were randomly selected for interview (Hofferth, Davis-Kean, Davis, & Finkelstein, 1997).

### *Study Sample*

The sample for this analysis includes only children 12 to 18 years of age in 2002 (see Table 1). The sample was also restricted to children in public schools in an attempt to reduce differences in quality of schooling. While it would have been desirable to look at ages prior to 12, the CDS does not ask questions about youth college aspirations or expectations until age 12. Further, although the CDS is a longitudinal data set, 2002 is the first year with data on youth college savings. The cross-sectional analysis was also restricted to youth currently enrolled in school. This reduces the sample size to 1,065.

[Insert Table 1 About Here]

### **Research Variables**

This analysis attempts to predict child expectations using variables ranging from child and parent characteristics to family income and child college savings. The responses for child characteristics were provided by the children and the parent responses by the parents.

### *Child Characteristics*

College expectations are measured by asking youth, “Many people do not get as much education as they would like. How far do you think you will actually go in school?”

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Do you think you will?" Response categories included: (1) Leave high school before graduation (2) Graduate from high School (3) Graduate from a two year Community College, (4) Graduate from a vocational school, such as beauty school, (5) Attend a 4 year college, (6) Graduate from a 4 year college, (7) Get more than 4 years college, (8)

Do something else?" Education literature suggests that minority and poor children are more likely to expect to attend a two-year college or less, while middle and upper class white students are more likely to expect to attend a four-year college (ACSFA, 2002).

Therefore, college aspirations are recoded as three categories: 1=no college, 2=vocational school or some college, and 3=bachelors or more, with bachelor or more as the reference group.

College aspirations are measured by asking youth, "How far would you like to go in school?" with the same eight response categories as college expectations. The eight response categories are recoded as three categories: 1=no college, 2=vocational school or some college, and 3=bachelors or more, with bachelor or more as the reference group.

Peer expectations are measured by asking youth, "How many of your friends do the following things: Plan to go to college?" The response categories are: 1=none, 2= a few, 3=some, 4=many, and 5=almost all or all.

Math achievement is used as a proxy for academic achievement. Math achievement is measured using the Woodcock Johnson (WJ-R) test of math achievement, a well-respected measure (Mainieri, 2006). The test is administered by an interviewer and is arranged in order of difficulty. The WJ-R has a standardized scoring protocol that measures the youth's math abilities in comparison to the national average for the youth's age (Mainieri, 2006). Normed scores were used in this study. The normed scores are

## Examining Minority and Poor Youth's College Aspirations and Expectations

constructed based on the child's raw score, or the number of correct items, and the child's age (Mainieri, 2006).

Math efficacy is measured using a set of scales developed by Eccles and colleagues (1993) for the domain of math (Mainieri, 2006). Math efficacy is used as a proxy for perceived academic capabilities of youth.

College savings is measured by asking the question, "Are you saving some of this money for future schooling, like college?" College savings is a dichotomous variable, children are asked to respond with 1=yes or 0=no.

### *Parent Characteristics*

Parent engagement is measured by creating an index summing together four different variables related to parent's participation in child's schooling. The four variables are: (1) "How often do you encourage child to read on (his/her) own?" (2) "If child brought home a report card with grades or progress lower than expected, would you contact his/her teacher or principal?" (3) "If child brought home a report card with grades or progress lower than expected, would you spend more time helping child with schoolwork?" and (4) "In the past month, how often did you work on homework with (him/her)?"

Parent aspirations are measured by asking parents, "In the best of all worlds, how much schooling would you like child to complete?" The eight response categories are recoded as three categories: 1=no college, 2=vocational school or some college, and 3=bachelors or more, with bachelor or more as the reference group.

Parent expectations are measured by asking parents, "Sometimes children do not get as much education as we would like. How much schooling do you expect that CHILD will really complete?" The eight response categories are recoded as three categories:

1=no college, 2=vocational school or some college, and 3=bachelors or more, with bachelor or more as the reference group.

Family income is a continuous variable summing total household income from the previous tax year (2001) including all taxable income, transfer income, and Social Security income for anyone in the family unit. In order to make the odds ratio more intelligible, family income is divided by \$1,000. For the purposes of descriptive statistics only, family income is collapsed into a dichotomous variable "\$25,001 or above" and "\$25,000 or less". The income poor are defined as families whose yearly incomes are \$25,000 or less.

Wealth (including home equity) is a continuous variable calculating household net worth, summing separate values for a business, checking or savings, real estate, stocks, and other assets, subtracting out credit card and other debt. Data are downloaded for 2002 and include main home equity. Because the distribution is skewed, with extreme positive and negative values, the natural log of this measure is used. For the purposes of descriptive statistics only, wealth is collapsed into a dichotomous variable \$13,001 or above and \$13,000 or less. Thirteen thousand dollars is the mean wealth for the sample. The asset poor are defined as families who have accumulated \$13,000 or less in wealth.

### *Demographics*

A variety of controls are used in this study and divided into youth characteristics and parental (or family) characteristics. Characteristics of the child include ethnicity, gender, and grade level. The analyses also controls for whether the head of household is female, and years of completed education of the household head.

### **Analyses**



## Examining Minority and Poor Youth's College Aspirations and Expectations

Data are analyzed using SAS version 9.1. Descriptive analyses include using a Chi-Square ( $X^2$ ) test of independence to examine the association between college expectations and future economic expectations. Proportional odds models are conducted to test how college savings impact college expectations (Allison, 2001). A proportional odds model extends logistic regression to handle ordinal response variables (Allison, 2001). Proportional odds models yield the following output: score test for proportionality, pseudo r-square, and odds ratios. The score test for proportionality estimates one equation over all levels of the dependent variable (Allison, 2001). The test for proportional odds tests whether the ordered logit coefficients are equal across the levels of the outcome variable; in this analysis, college expectations (Allison, 2001). A non-significant result means that the assumption that the ordered logit coefficients are equal across the levels of the outcome has been met and the null-hypothesis is rejected (Allison, 2001). While the score test for the proportional odds assumption is not strong, Allison (Allison, 2001) points out that when there are a lot of independent variables or if the sample size is large, the score test is likely to produce low  $p$ -values and that it does not mean the model should be rejected.

The DESCENDING option in SAS is used to reverse the order of the logit model, so that the highest value is predicted, whether children expect to attend a four-year college (Allison, 2001). Unlike the ordinal logistic regression (OLS) where r-square measures the percent of variance the model explains, the pseudo r-square measures the magnitude of the relationships (Allison, 2001). Further, an odds ratio is the ratio of the odds of an event occurring in one group to the odds of it occurring in another group and it is a measure of effective size (Allison, 2001).

There are four models. Asset variables are included in a stepwise fashion to test whether assets contribute additional information to the traditional model for predicting college expectations. The wealth measures are added at the very end after youth, parent, and income controls to make this a very conservative test of an independent asset effect. The first model controls for youth and parent-level characteristics with the exception of college aspirations. Youth college aspirations are added to model two to determine whether college aspirations significantly affect youth college expectations (Gogineni, Alsup, & Gillespie, 1995). A third model including college savings is run to determine if college savings adds additional information to the model. Wealth is added in a fourth model.

Next, three multiple regression models are constructed to test whether college expectations affect youth math achievement and to test whether college expectations act as a complete mediator of college aspirations (Gogineni et al., 1995). Model one includes college expectations but excludes college aspirations to analyze whether college expectations affect youth math achievement, the outcome variable of interest (Gogineni et al., 1995). In model two, college aspirations are added and college expectations are removed from the model to analyze whether college aspirations affect youth math achievement when college expectations are not present in the model (Gogineni et al., 1995). Model three includes both college aspirations and college expectations to determine if college aspirations adds additional information or whether, when controlling for college expectations, the relationship between college aspirations and math achievement is zero (Gogineni et al., 1995).

## Results

The 12 to 18 year old youth in this sample are located in grades ranging from under 6<sup>th</sup> grade thru 12<sup>th</sup> grade, with the majority in grades 7 through 11 (795 out of the 912 who reported a grade). The sample is fairly evenly distributed between whites (515) and blacks (501), and males (533) and females (532). The majority (76%) of the children come from families earning above \$25,000 per year. In addition, 66 percent of the children come from families who have accumulated over \$13,000 in wealth. Out of the 1065 children in this study, 355 report having savings set aside for college (see Table 1). Similar to other studies (ACSFA, 2002), the majority (88%) of youth aspire to attend at least some college (see Table 1). However, fewer (77%) youth expect to attend college. Further, while 91 percent of parents aspire for their children to attend college, only 75 percent expect them to attend college. Of these parents, 87 percent of black parents aspire for their children to attend college, compared to 95 percent of white parents.

[Insert Table 1 About Here]

Further, in this sample, youth expectations to attend college are associated with positive expectations about their future economic stability. Among youth who expect to attend college, 89 percent were optimistic they would have enough money to support themselves and their families by age 30. With 95% confidence, college expectations are associated with positive future economic expectations ( $X^2 = 24.1784$ ,  $df = 1$ ,  $p = .0001$ ). Further, youth with expectations to attend college are three times more likely to have positive future economic expectations than youth who do not expect to attend college.

*Aspirations, Expectations, and College Savings among Black and White Youth*

Among black youth, 83 percent aspire to attend college compared to 94 percent of white youth. While the vast majority of black youth (81%) expect to attend college, 19 percent of black youth compared to 8 percent of white youth do not expect to attend

college. More than double the black youth compared to white youth (35 white versus 85 black) do not expect to attend college and about one fourth more black youth (63 white versus 79 black) than white youth expect to attend vocational school or a two year college after graduating from high school. Further, 115 black youth compared to 225 white youth report having college savings (see Table 2).

*Aspirations, Expectations, and College Savings among the Income Poor*

Of the youth living in families who make \$25,000 or below, 80 percent aspire to attend college. Regarding expectations, 78 percent expect to attend college, 24 percent of these youth expect to attend a two year college or vocational school, and 54 percent expect to attend a four-year college (63% aspire to attend a four-year college), 22 percent do not expect to attend any college. In contrast, among youth living in families who make over \$25,000, 92 percent of youth aspire to attend college and 89 percent of these youth expect to attend college. Among the 89 percent who expect to attend college, 75 percent expect to attend a four-year college (81 percent aspire to attend a four-year college), 11 percent do not expect to attend any college. Further, the majority (313 compared to 42) of children who have college savings live in families with incomes above \$25,000 (see Table 2).

*Aspirations, Expectations, and College Savings among the Asset Poor*

Eighty-two percent of youth aspire to attend college and 77 percent expect to attend college among youth living in families who have accumulated \$13,000 or less in wealth. Of those youth who expect to attend college 19 percent expect to attend a two year college or vocational school, and 58 percent expect to attend a four-year college (67% aspire to attend a four-year college), 22 percent do not expect to attend any college. In contrast, among youth living in families with over \$13,000 in accumulated wealth, 92

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percent aspire to attend college and 90 percent of these youth expect to attend college.

Among the 90 percent who expect to attend college, 75 percent expect to attend a four-year college (81 percent aspire to attend a four-year college), 9 percent do not expect to attend any college. Further, the majority (289 compared to 69) of children who have college savings live in families who have accumulated more than \$13,000 worth of wealth (see Table 2).

### *Aspirations and Expectations among Youth with College Savings*

Among youth who have college savings, 95 percent aspire to attend college and 94 percent expect to attend college. Of those youth who expect to attend college 10 percent expect to attend a two-year college or vocational school, and 84 percent expect to attend a four-year college (88% aspire to attend a four-year college), five percent do not expect to attend any college. In contrast, among youth without college savings, 88 percent aspire to attend college and 84 percent of these youth expect to attend college. Among the 84 percent who expect to attend college, 18 percent expect to attend a two-year college or vocational school, and 66 percent expect to attend a four-year college (73 percent aspire to attend a four-year college), 16 percent do not expect to attend any college (see Table 3).

### *A Closer Look at Aspirations and Expectations among Youth with College Savings*

Eighty-eight percent of black youth with college savings aspire to attend college and 89 percent expect to attend college. Of those youth who expect to attend college 10 percent expect to attend a two-year college or vocational school, and 79 percent expect to attend a four-year college (82% aspire to attend a four-year college), 12 percent do not expect to attend any college.

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Amidst white youth with college savings, 96 percent aspire to attend college and 98 percent expect to attend college. Of those youth who expect to attend college 10 percent expect to attend a two-year college or vocational school, and 88 percent expect to attend a four-year college (90% aspire to attend a four-year college), three percent do not expect to attend any college.

In the ranks of the income poor youth with college savings, 80 percent aspire to attend college and 75 percent expect to attend college. Of those youth who expect to attend college 12 percent expect to attend a two-year college or vocational school, and 63 percent expect to attend a four-year college (75% aspire to attend a four-year college), three percent do not expect to attend any college.

Among asset poor youth with college savings, 85 percent aspire to attend college and 82 percent expect to attend college. Of those youth who expect to attend college 17 percent expect to attend a two-year college or vocational school, and 65 percent expect to attend a four-year college (72% aspire to attend a four-year college), three percent do not expect to attend any college.

### *Comparing Youth with Education Savings to Youth without Education Savings*

Figure one is a comparison of aspirations and expectations for attending a four-year college (only) among youth with college savings to youth without college savings. All groups with college savings have a higher percent of children who expect to attend a four-year college than similar groups without college savings. Asset poor children without savings for college have the lowest percent of children who expect to attend a four-year college of any group and white children have the highest percent of any group.

[Insert Figure 1 About Here]

### *Model One: Predicting College Expectations using Traditional Model*

Table two displays the regression analysis of college expectations on the traditional control variables included in model one. The likelihood ratio chi-square statistic [ $\chi^2=261.1099$ ,  $df=11$ ,  $p(\chi^2) <.0001$ ] suggests that the model fit the data. In addition, the score test for proportional odds assumption is nonsignificant ( $\chi^2=.19$ ) suggesting that there is sufficient replication within the data (see Table 2).

Of the independent variables, gender [ $b=-.4491$ ,  $\chi^2=6.1709$ ,  $p(\chi^2) =.01$ ], math achievement [ $b=.0502$ ,  $\chi^2=38.3620$ ,  $p(\chi^2)=.0001$ ], peer expectations [ $b=.4946$ ,  $\chi^2=38.4940$ ,  $p(\chi^2)=.0001$ ], and parent expectations [ $b=.6466$ ,  $\chi^2=39.6646$ ,  $p(\chi^2)=.0001$ ] are significantly associated with college expectations (see Table 2). Males are almost half as likely to be in a higher group of college expectations (*odds ratio*=.638,  $p=.01$ ) as females controlling for all other independent variables. For each one point increase in math achievement the likelihood of being in a higher group of college expectations goes up by about 5 percent (*odds ratio*=1.051,  $p=.0001$ ), controlling for all other independent variables. More positive peer expectations (*odds ratio*=1.640,  $p=.0001$ ) and parent expectations (*odds ratio*=1.909,  $p=.0001$ ) increased the likelihood of a youth being in a higher group of college expectations. The *pseudo R*<sup>2</sup> indicates that about 35 percent of the variance is explained (see Table 3).

[Insert Table 3 About Here]

*Model Two: Adding College Aspiration to the Model*

Table three displays the regression analysis of college expectations on the traditional control variables and college aspirations. The likelihood ratio chi-square statistic [ $\chi^2=423.0897$ ,  $df=12$ ,  $p(\chi^2) <.0001$ ] suggests that the model fits the data. In addition, the score test for proportional odds assumption is nonsignificant ( $\chi^2=.06$ ) suggesting that there is sufficient replication within the data (see Table 4).

## Examining Minority and Poor Youth's College Aspirations and Expectations

Gender is no longer significant while math achievement, peer expectations, and parent expectations remain statistically significant (see Table 4). In addition, college aspirations [ $b=1.8983$ ,  $x^2=153.2605$ ,  $p(x^2) = .0001$ ] are significantly associated with college expectations. Youth in a higher group of college aspirations are six times as likely to be in a higher group of college expectations (*odds ratio*=6.674,  $p=.0001$ ) controlling for all other independent variables. The *pseudo R*<sup>2</sup> indicates that about 53 percent of the variance is explained (see Table 4). The 95% confidence intervals for each independent variable are presented in Table 4.

[Insert Table 4 About Here]

### *Model Three: Adding College Savings to the Model*

Table five displays the regression analysis of college expectations on the traditional control variables including college savings. The Likelihood ratio chi-square statistic [ $x^2=237.3583$ ,  $df=13$ ,  $p(x^2) < .0001$ ] suggests that the model fits the data. In addition, the score test for proportional odds assumption is nonsignificant ( $x^2=.29$ ) suggesting that there is sufficient replication within the data (see Table 5).

Math achievement, peer expectations, and college aspirations remain statistically significant (see Table 5). Further parent's level of education [ $b=.2070$ ,  $x^2=5.9941$ ,  $p(x^2) = .0144$ ] and youth college savings [ $b=.7269$ ,  $x^2=4.2325$ ,  $p(x^2) = .0397$ ] are now significantly associated with college expectations. Youth with college savings are about two times as likely to be in a higher group of college expectations (*odds ratio*=2.069,  $p=.0397$ ) controlling for all other independent variables. The *pseudo R*<sup>2</sup> indicates that about 60 percent of the variance is explained. The 95% confidence intervals for each independent variable are presented in Table 5.

[Insert Table 5 About Here]



*Model Four: Adding Wealth to the Model with College Savings*

Table six displays the regression analysis of college expectations on the traditional control variables including college savings and wealth (with home equity). The likelihood ratio chi-square statistic [ $\chi^2=245.4221$ ,  $df=14$ ,  $p(\chi^2) <.0001$ ] suggests that the model fits the data. In addition, the score test for proportional odds assumption is nonsignificant ( $\chi^2=.43$ ) suggesting that there is sufficient replication within the data (see Table 6).

Math achievement, peer expectations, and college aspirations remain statistically significant (see Table 6). Parent's level of education is no longer statistically significant. While college savings approaches significance ( $p=.06$ ), it is no longer significant when wealth is added. Wealth (including home equity) is significantly [ $b=.0954$ ,  $\chi^2=7.03372$ ,  $p(\chi^2) =.0080$ ] associated with college expectations. For each one log unit increase in wealth, youth are about 10 percent more likely to be in a higher group of college expectations (*odds ratio*=1.100,  $p=.0080$ ) controlling for all other independent variables. The *pseudo R*<sup>2</sup> indicates that about 61 percent of the variance is explained (see Table 6). The 95% confidence intervals for each independent variable are presented in Table 6.

[Insert Table 6 About Here]

*Predicting Math Achievement, College Aspirations Excluded*

The multiple regression model is statistically significant [ $F(46,948)=19.53$ ,  $p=.0001$ ]. The independent variables account for about 36 percent of variance in a youth's math achievement score ( $R^2=.3790$ , *Adjusted R*<sup>2</sup>=.3596) (see Table 7).

[Insert Table 7 About Here]

Table 8 indicates that ethnicity is statistically significant with math achievement scores, controlling for all other independent variables ( $b=9.805$ ,  $t=6.59$ ,  $p=.0001$ ). Being

white is associated with a 9.81 increase in a youth's math achievement score. Math efficacy is associated with math achievement after holding all other independent variables constant ( $b=3.994$ ,  $t=5.74$ ,  $p=.0001$ ). A one point increase in a youth's math efficacy score is associated with a 3.99 increase in youth's math achievement score. College expectations are associated with math achievement after holding all other independent variables constant ( $b=4.673$ ,  $t=3.48$ ,  $p=.0006$ ). Being in a higher college expectation group is associated with a 4.67 increase in child's math achievement score.

Parent education is associated with youth math achievement scores after holding all other independent variables constant ( $b=1.231$ ,  $t=3.51$ ,  $p=.0005$ ). Each additional year of parent education is associated with a 1.23 increase in a youth's math achievement score. In addition, parent engagement is statistically associated with math achievement after holding all other independent variables constant ( $b=-.977$ ,  $t=-4.75$ ,  $p=.0001$ ). A one point increase in parent engagement is associated with about a 1 point decrease in child's math achievement score. More positive parent expectations are statistically associated with math achievement after holding all other independent variables constant ( $b=4.373$ ,  $t=4.06$ ,  $p=.0001$ ). Positive parent expectations are associated with a 4.06 increase in child's math achievement score. The 95% confidence intervals for each independent variable are presented in Table 7.

*Predicting Math Achievement, College Expectations Excluded*

The multiple regression model is statistically significant [ $F(45,803)=18.67$ ,  $p=.0001$ ] (See Table 8). The independent variables account for about 35% of variance in youth math achievement scores ( $R^2=.3673$ , *Adjusted*  $R^2=.3477$ ).

[Insert Table 8 About Here]

Table 9 indicates ethnicity, gender, math efficacy, parent's education, parent engagement, and parent expectations remain statistically significant with math achievement scores, controlling for all other independent variables (see Table 8). Further, college aspirations are statistically associated with math achievement after holding all other independent variables constant ( $b=3.263$ ,  $t=2.37$ ,  $p=.0180$ ). Being in a higher college aspiration group is associated with a 3.26 increase in a youth's math achievement score. The 95% confidence intervals for college aspiration are presented in Table 8.

*Predicting Math Achievement, Including Both College Expectations and College Aspirations*

The multiple regression model is statistically significant [ $F(46,493)=17.81$ ,  $p=.0001$ ] (see Table 9). The independent variables account for about 36% of variance in youth math achievement scores ( $R^2=.3782$ , *Adjusted*  $R^2=.3569$ ).

[Insert Table 9 About Here]

Table 9 indicates ethnicity, gender, math efficacy, parent's education, parent engagement, and parent expectations remain statistically significant with math achievement scores, controlling for all other independent variables (see Table 9). While college expectations remain statistically significant with math achievement after holding all other independent variables constant ( $b=4.505$ ,  $t=2.62$ ,  $p=.0092$ ), college aspirations do not (see Table 9). In this sample, college expectations act as a complete mediator for college aspirations as hypothesized (Gogineni et al., 1995).

## **Discussion**

The vast majority of black, white, poor, and higher income youth in this study aspire to attend college and recognize the economic benefits of a college education for future economic stability. In addition, most parents want their child to attend college.

However, when expectations are examined, the potential negative role that institutions can play in determining prosperity versus poverty is revealed.

This is particularly clear when looking at the differences in expectations by income level. Among youth who live in families with incomes over \$25,000, 89 percent expect to attend at least some college compared to 78 percent of youth living in families making \$25,000 or less. Further, while 75 percent of higher income youth expect to attend a four-year college, only 54 percent of low-income youth expect to attend a four-year college. Data from National Center for Education Statistics (NCES) shows similar trends in low-income expectations (ACCSFA, 2002). ACCSFA finds that 59 percent of low-income students (\$25,000 or less) with high unmet need (\$3,800 or more) in eighth grade expect to attend college compared to 92 percent of high-income (\$75,000) students in eighth grade with low unmet need (\$400 or less).<sup>4</sup> These patterns translate into future economic disadvantage (Wilson, 1987), including lower income and earnings (Murphy & Welch, 1989), less stable employment (Topel, 1993) and lower wealth (Oliver & Shapiro, 1995; Shapiro, 2004).

Further, Reynolds and Pemberton (2001) find that only about 20 percent of the variance in college expectations can be explained by using typical factors. Similarly, ACCSFA (2002) finds that traditional factors are inadequate for explaining college expectations. This study supports these findings. Only 35 percent of the variance could be explained using traditional factors. Since college expectations and aspirations are often treated as synonyms, aspirations are often left out of models attempting to predict

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<sup>4</sup> Unmet need is, "the portion of college expense not covered by the expected family contribution (EFC) and student aid, including work-study and loans" (Advisory Committee on Student Financial Assistance, 2002).

college expectations. In this study, aspirations are treated as an independent variable.

Youth aspirations to attend college accounted for an additional 18 percent of the variance in college expectations. This suggests that a youth's desire to attend college is an important and necessary condition for understanding youth college expectations, however, not a sufficient condition.

In addition, we hypothesized that adding college savings would further improve the predictive power of the traditional model of college expectations. Adding youth college savings increases the amount of variance explained by an additional 7 percent (overall, 60% of the variance was explained). For black, white, income poor, and asset poor children with college savings, expectations were higher in comparison to black, white, income poor, and asset poor children without college savings. Asset poor children without college savings had the lowest expectations for attending a four-year college than any other group of children. While college savings in this study was a proxy for children's development accounts (CDAs), the findings suggest that policies that promote CDAs are likely to have a positive impact on a youth college expectations.

College savings did not have a direct effect on math achievement. However, it appears to have an indirect effect through college expectations. Shobe and Page-Adams (2001) suggest, "... that future orientation may play an intermediate role in the relationship between assets and other positive social and economic outcomes." They go on to say, "... that savings *first* provide people with otherwise unattainable opportunities to hope, plan, and dream about the future for themselves and their children" (italics in original, 2001, p. 119). From this perspective, college savings leads to positive expectations about college which in turn lead to better academic outcomes.

In addition to testing the role of college savings, it was hypothesized that college expectations act as a mediator for college aspirations. Findings from this study suggest that college expectations act as a mediator for college aspirations. College aspirations significantly affect college expectations, college expectations significantly affect math achievement and college aspirations significantly affect math achievement; however, controlling for college expectations completely removes the significant relationship between college aspirations and math achievement (Gogineni et al., 1995). This is important because it suggests that expectations, which are determined at least in part by institutions, might be more important for predicting academic behavior than aspirations.

*Limitations and Future Research*

It would have been desirable to test college enrollment in addition to academic achievement, however, longitudinal data are not yet available. College savings is about access to college and is likely to have not only indirect effects on college enrollment through increased college expectations which in turn lead to increased academic achievement, but direct effects on college enrollment of youth. In the future, researchers might want to test the role of college savings in predicting whether youth are more likely to enroll in college than their counterparts who do not have college savings.

Future research should examine whether children with college savings have different belief systems than children without college savings. For the purposes of this research the normative stance suggested by Sherraden and Barr (2005) was adopted,

... our view in this discussion is that many of the poor are not different from many of the nonpoor... until everyone has the same institutional opportunities and public subsidies for asset accumulation, it is not possible to know whether their reactions to institutional structures would be different from others. (p. 288)

## Examining Minority and Poor Youth's College Aspirations and Expectations

Further, future research should examine the effects of CDAs on low-income children's college expectations. CDAs could be designed to offer saving matches, saving deposits for academic achievement, and/or money for civic service, for example (Johnson & Sherraden, 2006). Do accounts designed specifically for the poor help explain more of the variance in college expectations among low-income populations? Research underway, attempts to examine this and other related questions. For example, there is a national demonstration called Saving for Education, Entrepreneurship, and Downpayment (SEED) designed to test the importance of matched savings accounts and financial education for children and youth.<sup>5</sup>

### **Conclusion**

While more research is needed, CDAs show promise for providing a way to help poor and minority youth make decisions about attending college that are in line with their aspirations. Further, expectations may be one of the missing links in predicting outcomes of poverty versus prosperity.

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<sup>5</sup> For more information on SEED, visit the website [www.cfed.org](http://www.cfed.org).

## Examining Minority and Poor Youth's College Aspirations and Expectations

**Table 1: Demographics**

Characteristics	Number (%)*
<b><i>Child race</i></b>	
White	515 (51)
Black	501 (49)
<b><i>Child sex</i></b>	
Male	533 (50)
Female	532 (50)
<b><i>Child grade</i></b>	
Less than 6 <sup>th</sup> grade	6 (01)
6 <sup>th</sup> grade	72 (08)
7 <sup>th</sup> grade	154 (16)
8 <sup>th</sup> grade	145 (15)
9 <sup>th</sup> grade	170 (18)
10 <sup>th</sup> grade	173 (18)
11 <sup>th</sup> grade	153 (16)
12 <sup>th</sup> grade	69 (07)
<b><i>College Savings</i></b>	
College savings	355 (72)
No college savings	135 (28)
<b><i>College aspirations*</i></b>	
No college	104 (11)
Some college	110 (12)
Bachelor or more	692 (76)
<b><i>College expectations</i></b>	
No college	124 (13)
Some college	152 (17)
Bachelor or more	636 (70)
<b><i>Parent aspirations*</i></b>	
No college	96 (09)
Some college	40 (04)
Bachelor or more	928 (87)
<b><i>Parent expectations</i></b>	
No college	262 (25)
Some college	72 (07)
Bachelor or more	725 (68)
<b><i>Income Poor</i></b>	
\$25,000 or less	252 (24)
More than \$25,000	811 (76)
<b><i>Asset Poor</i></b>	
\$13,000 or less	360 (34)
More than \$13,000	705 (66)

\*Percents do not include missing values; N=1065



## Examining Minority and Poor Youth's College Aspirations and Expectations

**Table 2:** Descriptive Statistics Examining Who Saves for College and Who Aspires and Expects to Attend College for Black, White, Income Poor and Asset Poor Youth

Characteristics	African Americans Number (%)*	White Americans Number (%)	Income Poor		Asset Poor	
			\$25,000 or Less Number (%)	More than \$25,000 Number (%)	\$13,000 or less Number (%)	More than \$13,000 Number(%)
<b><i>College Savings</i></b>						
College savings	115 (76)	225 (70)	42 (64)	313 (74)	66 (69)	289 (73)
No college savings	37 (24)	95 (30)	24 (36)	111 (26)	30 (31)	105 (27)
<b><i>College aspirations*</i></b>						
No college	79 (18)	25 (06)	44 (20)	59 (09)	55 (18)	49 (08)
Some college	50 (12)	51 (12)	36 (17)	73 (11)	45 (15)	65 (11)
Bachelor or more	310 (71)	352 (82)	137 (63)	555 (81)	204 (67)	488 (81)
<b><i>College expectations</i></b>						
No college	85 (19)	35 (08)	48 (22)	75 (11)	69 (22)	55 (09)
Some college	79 (18)	63 (15)	52 (24)	100 (14)	60 (19)	92 (15)
Bachelor or more	279 (63)	330 (77)	119 (54)	517 (75)	182 (58)	454 (75)

\*Percents do not include missing values; N=1065

**Table 3:** Logistic Regression Model One, College Expectations among Children 12 to 18 (Traditional model)

Independent variables	<i>b</i>	$x^2$	<i>df</i>	<i>odds ratios</i>	<i>95% C.I.</i>	$p(x^2)$
<b><i>Child controls</i></b>						
Ethnicity	-.1920	.7599	1	.825	.536 – 1.271	.3834
Gender	-.4491	6.1709	1	.638	.448 – .910	.0130
Grade	.0562	1.0285	1	1.058	.949 – 1.179	.3105
Math achievement	.0502	38.3620	1	1.051	1.035 – 1.068	.0001
Math efficacy	.1714	3.5027	1	1.187	.992 – 1.420	.0613
Peer expectations	.4946	38.4940	1	1.640	1.403 – 1.917	.0001
<b><i>Parent controls</i></b>						
Married	-.1696	.7193	1	.844	.570 – 1.249	.3964
Education	.0407	.7526	1	1.042	.950 – 1.142	.3857
Parent engagement	-.0294	1.1005	1	.971	.919 – 1.026	.2941
Parent expectations	.6466	39.6646	1	1.909	1.561 – 2.335	.0001
<b><i>Family income</i></b>						
	.0006	.2128	1	1.001	.998 – 1.003	.6446

$R^2=.28$ ; *pseudo R*<sup>2</sup>=.35; n=800

**Table 4:** Logistic Regression Model Two, College Expectations among Children 12 to 18 (College aspirations included)

Independent variables	<i>b</i>	$x^2$	<i>df</i>	<i>odds</i>	<i>95% C.I.</i>	$p(x^2)$
<b><i>Child controls</i></b>						
Ethnicity	-.1656	.4379	1	.847	.519 – 1.384	.5081
Gender	-.3173	2.4335	1	.728	.489 – 1.085	.1188
Grade	.0332	.2695	1	1.034	.912 – 1.172	.6037
Math achievement	.0320	13.5930	1	1.032	1.015 – 1.050	.0002
Math efficacy	.0314	.0888	1	1.032	.839 – 1.269	.7657
College aspirations	1.8983	153.2605	1	6.674	4.942 – 9.014	.0001
Peer expectations	.3453	14.3978	1	1.412	1.182 – 1.688	.0001
<b><i>Parent controls</i></b>						
Married	-.0681	.0905	1	.934	.599 – 1.456	.7636
Education	.0448	.7023	1	1.046	.942 – 1.161	.4020
Parent engagement	-.0138	.1833	1	.986	.926 – 1.051	.6686
Parent expectations	.3484	8.6034	1	1.417	1.123 – 1.788	.0034
<b><i>Family income</i></b>						
	.0002	.0209	1	1.000	.997 – 1.003	.8850

$R^2=.42$ ; *pseudo R*<sup>2</sup>=.53; n=781

**Table 5:** Logistic Regression Model Three, Predicting College Expectations among Children 12 to 18 (College savings included)

Independent variables	<i>b</i>	$x^2$	<i>df</i>	<i>odds</i>	95% <i>C.I.</i>	$p(x^2)$
<b><i>Child controls</i></b>						
Ethnicity	-.7414	3.2583	1	.476	.213 – 1.066	.0711
Gender	.0258	.0057	1	1.026	.525 – 2.007	.9399
Grade	-.0018	.0003	1	.998	.808 – 1.233	.9864
Math achievement	.0319	6.1767	1	1.032	1.007 – 1.059	.0129
Math efficacy	-.2205	1.4689	1	.802	.562 – 1.146	.2255
College aspirations	2.2650	67.6988	1	9.631	5.615 – 16.519	.0001
Peer expectations	.5609	13.5231	1	1.752	1.299 – 2.363	.0002
<b><i>Parent controls</i></b>						
Married	.5757	2.3109	1	1.778	.847 – 3.736	.1285
Education	.2070	5.9941	1	1.230	1.042 – 1.452	.0144
Parent engagement	-.0972	2.9450	1	.907	.812 – 1.014	.0861
Parent expectations	.1580	.5521	1	1.171	.772 – 1.777	.4574
<b><i>Family income</i></b>	<b>-.0004</b>	<b>.1076</b>	<b>1</b>	<b>1.000</b>	<b>.997 – 1.002</b>	<b>.7428</b>
<b><i>College savings</i></b>	<b>.7269</b>	<b>4.2325</b>	<b>1</b>	<b>2.069</b>	<b>1.035– 4.135</b>	<b>.0397</b>

$R^2=.43$ ;  $pseudo R^2=.60$ ;  $n=425$

**Table 6:** Logistic Regression Model Four, Predicting College Expectations among Children 12 to 18 (Wealth included)

Independent variables	<i>b</i>	$x^2$	<i>df</i>	<i>odds</i>	95% <i>C.I.</i>	$p(x^2)$
<b><i>Child Controls</i></b>						
Ethnicity	-1.1120	6.4906	1	.329	.140 – .774	.0108
Gender	-.1722	.2416	1	.842	.424 – 1.673	.6231
Grade	-.0030	.0008	1	.997	.803 – 1.237	.9780
Math achievement	.0323	6.4382	1	1.033	1.007 – 1.059	.0112
Math efficacy	-.2112	1.3374	1	.810	.566 – 1.158	.2475
College aspirations	2.1818	62.1870	1	8.862	5.153 – 15.243	.0001
Peer expectations	.5757	14.1304	1	1.778	1.317 – 2.401	.0002
<b><i>Parent Controls</i></b>						
Married	.2486	.3932	1	1.282	.590 – 2.789	.5306
Education	.1423	2.6466	1	1.153	.971 – 1.368	.1038
Parent engagement	-.0973	2.8763	1	.907	.811 – 1.015	.0899
Parent expectations	.1636	.5967	1	1.178	.778 – 1.784	.5967
<b><i>Family Income</i></b>						
	-.0014	.9491	1	.999	.996 – 1.001	.3299
<b><i>Assets</i></b>						
College savings	.6662	3.4640	1	1.947	.965 – 3.927	.0627
Wealth	.0954	7.0337	1	1.100	1.025 – 1.180	.0080

$R^2=.44$ ;  $pseudo R^2=.61$ ;  $n=425$

**Table 7:** Multiple Regression of Math Achievement on Children, Parent, Family Income, and Asset Variables (College aspiration are not included in model)

Independent variables	<i>b</i> ( <i>t</i> -value)	<i>p</i>	<i>df</i>	95% <i>C.I.</i>	$\beta$
<b><i>Child controls</i></b>					
Ethnicity	9.805 (6.59)	.0001	1	6.551 – 13.058	.268
Gender	2.945 (2.14)	.0332	1	.236 – 5.654	.087
Grade	-.546 (-1.30)	.1941	1	-1.370 – .279	-.056
Math efficacy	3.994 (5.74)	.0001	1	2.628 – 5.362	.230
College expectations†	4.673 (3.48)	.0006	1	2.033 – 7.313	.166
Peer expectations	.363 (.48)	.6334	1	-1.133 – 1.860	.022
<b><i>Parent controls</i></b>					
Married	-.801 (-.70)	.6401	1	-4.167 – 2.565	-.020
Education	1.231 (3.51)	.0005	1	.541 – 1.921	.156
Parent engagement	-.977 (-4.75)	.0001	1	-1.381 – -.573	-.207
Parent expectations	4.373 (4.06)	.0001	1	2.253 – 6.493	.181
<b><i>Family income</i></b>	<b>-.002 (-.34)</b>	<b>.7350</b>	<b>1</b>	<b>-.013 – .009</b>	<b>-.015</b>
<b><i>Assets</i></b>					
College savings	.490 (.31)	.7545	1	-2.589 – 3.569	.013
Wealth	-.000 (-.00)	.9991	1	-.109 – .109	.000

†College expectations are statistically significant  
 $R^2=.38$ ; *Adjusted R*<sup>2</sup>=.36; n=429

**Table 8:** Multiple Regression of Math Achievement on Children, Parent, Family Income, and Asset Variables (College expectations are not included in model)

Independent variables	<i>b</i> ( <i>t</i> -value)	<i>p</i>	<i>df</i>	95% <i>C.I.</i>	$\beta$
<b><i>Child Controls</i></b>					
Ethnicity	9.525 (5.76)	.0001	1	6.276 – 12.774	.258
Gender	2.996 (2.16)	.0314	1	.268 – 5.724	.088
Grade	-.683 (-1.61)	.1092	1	-1.520 – .153	-.071
Math efficacy	3.911 (5.56)	.0001	1	2.529 – 5.293	.226
College aspirations <sup>†</sup>	3.263 (2.37)	.0180	1	.562 – 5.964	.111
Peer expectations	.790 (1.06)	.2919	1	-.681 – 2.261	.047
<b><i>Parent Controls</i></b>					
Married	-.366 (-.21)	.8318	1	-3.748 – 3.017	-.009
Education	1.314 (3.78)	.0002	1	.631 – 1.998	.167
Parent engagement	-1.056 (-5.07)	.0001	1	-1.465 – -.647	-.223
Parent expectations	4.321 (3.89)	.0001	1	2.138 – 6.504	.179
<b><i>Family Income</i></b>	<b>-.002 (-.39)</b>	<b>.6959</b>	<b>1</b>	<b>-.013 – .009</b>	<b>-.017</b>
<b><i>Assets</i></b>					
College savings	1.290 (.83)	.4063	1	-1.760 – 4.339	.034
Wealth	.005 (.09)	.9277	1	-.105 – .115	.004

<sup>†</sup>College aspirations are statistically significant

$R^2=.37$ ; *Adjusted R*<sup>2</sup>=.35; n=431

**Table 9:** Multiple Regression of Math Achievement on Children, Parent, Family Income, and Asset Variables (College expectations and college aspirations included in model)

Independent variables	<i>b</i> ( <i>t</i> -value)	<i>p</i>	<i>df</i>	95% <i>C.I.</i>	$\beta$
<b><i>Child controls</i></b>					
Ethnicity	9.688 (5.81)	.0001	1	6.407 – 12.968	.263
Gender	3.000 (2.15)	.0318	1	.262 – 5.738	.088
Grade	-.607 (-1.42)	.1550	1	-1.445 – .230	-.063
Math efficacy	3.954 (5.61)	.0001	1	2.568 – 5.340	.228
College aspirations†	.331 (.19)	.8526	1	-3.173 – 3.835	.011
College expectations†	4.505 (2.62)	.0092	1	1.121 – 7.889	.160
Peer Expectations	.356 (.46)	.6440	1	-1.156 – 1.867	.021
<b><i>Parent controls</i></b>					
Married	-.936 (-.54)	.5890	1	-4.340 – 2.467	-.023
Education	1.264 (3.57)	.0004	1	.568 – 1.961	.159
Parent engagement	-.998 (-4.78)	.0001	1	-1.409 – -.587	-.211
Parent expectations	4.242 (3.75)	.0002	1	2.017 – 6.468	.175
<b><i>Family income</i></b>	<b>-.002 (-.34)</b>	<b>.7365</b>	<b>1</b>	<b>-.013 – .009</b>	<b>-.014</b>
<b><i>Assets</i></b>					
College savings	.625 (.40)	.6930	1	-2.483 – 3.732	.016
Wealth	-.002 (-.04)	.9684	1	-.112 – .108	.002

†College aspirations are not statistically significant when college expectations are controlled for.

$R^2=.38$ ; *Adjusted R*<sup>2</sup>=.36; n=424



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