Contextual Effects on College Expectations and Educational Achievement: A Longitudinal Analysis.

Bethany G. Everett,

University of Colorado at Boulder

Jarron M. Saint Onge

University of Houston

Address for correspondence: Bethany Everett, Population Program, 484 UCB, University of Colorado, Boulder, CO 80309-0484; e-mail: Bethany.Everett@Colorado.edu; phone 303 492-7986; fax: 303 492-6924.

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ABSTRACT

Neighborhood characteristics have been shown to be related to individual educational attainment. Using the National Longitudinal Study of Adolescent Health and a family process model, we examine the role of neighborhood in influencing adolescents' overall expectations for their future accomplishments and subsequently examine how these expectations affect actual educational achievement in young adulthood. We control for census level neighborhood characteristics and employ multilevel random effects models to capture unobserved neighborhood level heterogeneity in our analysis. Moreover, we include mean individual expectations at the neighborhood level to capture normative neighborhood processes. Results show that neighborhood and school characteristics are important predictors of both expectations and future outcomes and even after these controls, intra-neighborhood variance accounts for roughly 13% of outcome variation (ICC=.13). Additionally, normative expectations also influence individual level expectations and outcomes. These results provide further compelling evidence regarding the role of place as being an important predictor of educational aspirations and achievement.

INTRODUCTION

Understanding disparities in educational achievement is a constructive approach for understanding inequality in the United States. Research has documented that the majority of youth indicate high levels of educational aspiration, with the majority indicating that they expect to complete a college education (Kao and Thompson 2003). But, not all students with these aspirations go on to begin a college degree and fewer finish a college education. Educational aspirations have significant and lasting impacts on social standing, with important links to differences in educational and occupational attainment (Campbell 1983; Hill, Castellino, Lansford, Nowlin, Dodge, Bates, and Pettit 2004). Research has consistently shown the importance of socioeconomic status (SES) on educational attainment, with economically disadvantaged children less likely to attend college (Mayer 1997). We focus on educational aspirations as a way to explain how educational disparities are perpetuated and/or mitigated in order to further explore dimensions of inequality.

Numerous studies focus on the importance of child and parental characteristics for educational outcomes, with an emphasis on individual-level factors including personal characteristics, family SES, peer groups, teachers, and social networks (Bohon, Johnson, and Gorman 2006; Brooks-Gunn, Duncan, and Aber 1997; Campbell 1983; Kao and Tienda 1998; Wang and Gordon 1994). Much of this research has not incorporated larger structural level characteristics, such as the school and residential context of children. While contextual research has consistently shown consistent relationships with educational outcomes, both in educational attainment and objective education outcomes such as performance achievement, fewer studies have examined the importance of neighborhoods on educational aspirations. We argue that structure and agency work co-constitutively to influence educational aspirations and subsequent

educational outcomes. We focus on both structural characteristics of respondents' neighborhoods and schools, as well as individual characteristics to explore educational expectations and achievement. Moreover, this paper is the first, to our knowledge, to link college expectations measured in adolescence to actual college completion in young adulthood.

Expectations and Achievement

Theoretical and empirical evidence suggests that race/ethnicity, family dynamics, parent-child interaction, and SES influence college expectations (Hanson 1994; Hao and Bonstead-Bruns 1998; Kao and Tienda 1998). Status socialization theory posits that individual expectations are critical for achievement with traditional status-attainment models of educational aspirations focused on individual differences in social class membership (Barr and Dreeben 1983). Educational aspirations can be conceptualized as a reflection of a state of mind for academic success (Caplan, Choy, and Whitmore 1991). As such, this is a cognitive state shaped through the socialization process through peers, parents, and teachers, through both direct and indirect forms of role-modeling (Hauser, Tsai, and Sewell 1983; Sewell 1971; Sewell, Haller, and Ohlendorf 1970; Sewell, Haller, and Portes 1969). For instance, disadvantage has been linked to lower levels of parental optimism and parental efficacy for their children's educational advancement , which may impact both motivations and outcomes (Bandura 1997; Duncan, Yeung, Brooks-Gunn, and Smith 1998; Elder Jr, Eccles, Ardelt, and Lord 1995).

Recent studies have begun to expand traditional status attainment models to introduce family process models (Crosnoe, Mistry, and Elder Jr 2002; Elder 1999; McLoyd 1998) that emphasize the relationship between parental social psychological resources, familial relationships, and parental behaviors as well as economic disadvantage. These studies have

suggested the importance of interpersonal relationships within the family, through parenting behaviors and sibling relationships (Crosnoe 2004; Crosnoe, Mistry, and Elder Jr 2002; Melby, Conger, Fang, Wickrama, and Conger 2008). Importantly, family process models recognize the importance of structural and ecological characteristics (Bronfenbrenner and Morris 1998). Because expectations and parenting behaviors are largely influenced by the behaviors and achievements of those around them, large disparities in educational expectations and outcomes have emerged by school and neighborhood context (Bohon, Johnson, and Gorman 2006; Ceballo and McLoyd 2002; Ceballo, McLoyd, and Toyokawa 2004; Hanson 1994; Hauser and Anderson 1991).

Neighborhoods and Achievement

Educational aspirations are linked to material resources and economic evaluations of current positions (Jencks, Crouse, and Mueser 1983). Educational attainment is likely to be influenced by a combination of numerous contexts, including parental, school, and neighborhood contexts. Research indicates that adolescence is a critical point in the lifespan for determining future aspirations (Hill et al. 2004). The combinations of peer influences and parental support interact within school-based norms to shape educational aspirations at the individual level. The amount of time spent with peers inside and outside of school and the influence of community members makes neighborhood and school-level processes particularly salient for adolescents' education during this developmental stage. Boardman and Saint Onge (2005) find that among a large index of adolescent outcomes, educational outcomes had the most consistent relationship with neighborhoods, with neighborhood variance as indicated by intra-class correlations ranging from .06 for subjective measures of intelligence to .25 for external assessments.

Neighborhoods exist as sites of inequality reproduction (Wilson 1987). Neighborhoods have been shown to be stratified along a number of dimensions including education, income, crime, poverty, unemployment, and material resources (Jargowsky 1997; Massey and Denton 1993; Squires and Kubrin 2005; Wilson 1987). Residential location is a major determinant of both peer groups and school selection and is likely to have lasting implications, with neighborhood disadvantage linked to numerous negative outcomes (Jencks and Mayer 1990). For example, high concentrations of poverty and unemployment have been theoretically linked to oppositional values that may lower future expectations and outcomes (Wilson 1987).

A variety of empirical research has documented that adolescents' neighborhoods can either encourage or deter educational attainment (Brooks-Gunn et al. 1993; Crane 1991; Duncan 1994). Neighborhoods with high levels of disorganization, characterized by high rates of unemployment and crime, coupled with low levels of education and income are not only producing adverse outcomes for adults, but also handicap the well being of the youth that reside in these areas. For example the dropout rate has been found to be three times higher in distressed neighborhood compared to those that are not characterized by distress (Kasarda 1993). Among older adolescents, Duncan (1994) also finds that concentrated disadvantage (e.g., proportion of households that are low-income or headed by a female) is negatively associated with their years of schooling, the likelihood of completing high school, and subsequently the likelihood of entering college.

On the other hand, high levels of income and high status professions are associated with a reduced risk of dropping out of high school (Brooks-Gunn, Duncan, Klebanov, and Sealand 1993; Crane 1991). High concentrations of relative affluence incorporates both material and cultural resources that influence successful school integration (Leventhal and Brooks-Gunn

2000; Roscigno and Ainsworth-Darnell 1999). Other work has focused on the specific characteristics of neighborhoods that lead to low levels of achievement and found that in particular, proportions of college graduates, neighborhood levels of income, and neighborhood stability are all key indicators of better scores on math and reading tests as well as increased time spent on homework (Ainsworth 2002).

AIMS

We focus on two main research questions in this analysis. First, what are the structural and individual level characteristics that influence adolescents' college expectations? Second, are these expectations related to actual college attendance and completion?

METHODS

Data

This research uses data from the National Longitudinal Study of Adolescent Health. The Add Health study began in the fall of 1994 and involves a nationally representative, longitudinal sample of US adolescents. The initial Add Health sample was drawn from 80 high schools and 52 middle schools, with unequal probability of selection, throughout the United States (Bearman, Jones, and Udry 1997 1997; Harris, Florey, Tabor, Bearman, Jones, and Udry 2003). The first wave of the Add Health study surveyed 90,118 adolescents who filled out a brief in-school survey. A sub-sample of students (n=20,747) and their parents were asked to additionally fill out an in-depth home interview survey. High school seniors in Wave I of Add Health were not selected for follow-up for wave II, but were reclaimed for the wave III sample, conducted in 2001 and 2002. A fourth wave of Add Health is on the verge of being released. This wave followed the original first wave of respondents between the years 2007 and 2008. The

preliminary release of Wave IV variables includes information on college completion. Response rates for this study were 79% for wave 1, 88% for wave II, and 77.4% for wave III. In Wave I, respondent household's latitude and longitudinal coordinates were coded using GPS devices and subsequently linked to information gathered from the US Census, the Center for Disease Control and Prevention, and other published data sets in order to provide neighborhood level information on income and poverty, labor force participation, household characteristics and several other neighborhood aspects. We use information from wave I and wave IV of the Add Health data resulting in an eligible sample of 12,213 respondents. We further restrict the sample to respondents who have full information on the variables of interest, resulting in a final sample size of 11,517 respondents.

Measures

Dependent Variable. The first analysis focuses on the correlates of college expectations in Wave I of the survey. This measure is coded as a dummy variable derived from the question "On a scale of 1 to 5, where 1 is low and 5 is high, how likely is it that you will go to college?" Those respondents who marked 3, 4, or 5 are coded as 1, and respondents who marked 1 or 2 are the referent category or the "low expectation" group. The second analysis focuses on actual college achievement by Wave IV. We use two indicators: the first is a binary variable that measures whether respondents have attended "some college" and the second is a binary variable that captures whether the respondent had completed college.

Contextual Variables. We include a variety of contextual variables at both the neighborhood and school level that capture multiple aspects of a specific census block. These include the proportion of persons that own their own house, the proportion of persons with

income that falls below the poverty line, the proportion of persons without a high school degree, and the race/ethnic dispersion of a specific community. The specific percentage cutoffs for each variable and the percent of communities that fall within these cutoffs may be found in table 1. We also include a measure of the mean level of college expectations in a school rating the likelihood of attending college on a scale of 1 to 5. From the mean un-weighted scores, quartile dummy variables were created to capture whether respondents attended schools in the first, second, third or fourth quartile of college expectations.

Individual Level Variables. Included as separate controls in the models are: age (11 to 14; 14 to 16; 16-18; and 18+ [referent]), race/ethnicity (non-Hispanic white [referent], non-Hispanic black, Hispanic, Asian, or other); sex (female=1, male=0 [referent]), respondent's parent's education, and respondent's education at wave III. Relationship with parent is a continuous variable that ranges from 1 to 5 that derived from the question that asks respondents: "Overall, you are satisfied with your relationship with your mother."

Adolescents' attachment to school at wave I is a scaled measure that ranges from 1.25 to 6.25 and has a Cronbach alpha of .84 constructed from a series of questions that ask respondents to identify if: 1) they feel close to people at their school, 2) they feel like they are a part of their school, 3) they are happy to be at their school, 4) teachers at their school treat students fairly, and 4) they feel safe at school.

Attachment to neighborhood is measured as a scale comprised of a series of questions that ask respondents to identify how true the following statements are for them: 1) you know most of the people in your neighborhood, 2) in the past month, you have stopped on the street to talk with someone who lives in your neighborhood, 3) people in this neighborhood look out for each other, 4) you use a physical fitness or a recreation center, 5) you usually feel safe in your

neighborhood, 6) on the whole, how happy are you with living in your neighborhood, and 7) if, for any reason, you had to move from here to some other neighborhood, how happy or unhappy would you be? The scale ranges from one to seven. We also include depression as an indicator of individual-level mental health. Depression is measured using a ten-item CES-D scale that ranges from 0-30 (for similar coding see Meadows, Brown & Elder, 2006).

Analytic Plan

We first present descriptive statistics for the total sample and delineated by low (≤ 2) or high (>2) college expectations. We perform t-tests to examine whether there are statistically significant differences for all covariates and the dependent variables by expectation. We next perform multilevel, multivariate logistic regressions with random slopes to predict high expectations for college achievement, as well as future educational achievement by wave IV of the survey. While we include measures that capture specific community level aspects that affect college expectations and achievement, in order to address endogeneity derived from immeasurable neighborhood level characteristics, we allow the intercepts by neighborhood to vary and account for non-independence between individuals nested within the same community. We employ the GLLAMM commands available in Stata 9.0.

RESULTS

Descriptive Statistics

Table 1 provides descriptive information on the covariates and dependent variables for our analysis. This table shows that almost 92% of the total sample expects to attend college, while only 67% complete some college and 33% attain a bachelor's degree. Splitting the

analysis by expectations to attend college highlights important differences emerge between the two groups.

(Table 1 about here)

Those respondents who expect to attend college are statistically significantly younger and more likely to be Asian American. Moreover, they are more likely to reside in communities where greater than 75% of the population owns their house, less than 10% of the population lives below the poverty line, less than 20% does not have a high school degree, and they are more likely to attend schools with high mean levels of college expectations. There are no differences by race/ethnic categories. There are also meaningful differences in the individual level variables. Respondents with high expectations for college report better relationships with their parents, higher levels of both school and neighborhood attachment, and lower levels of depression. Lastly, there are major differences between the two groups and actual college achievement. Indeed, only 26% of those respondents with low college expectations report having completed some college, compared to 71% of those with high expectations. Moreover, only 4% of the low expectation group have completed a bachelor degree compared to 36% of respondents with high expectations. These dramatic differences warrant further multivariate exploration of the relationship between community, college expectations, and actual achievement.

Correlates of High College Expectations

Table 2 presents the odds ratios predicting high college expectations derived from multivariate logistic regression with a random intercepts. Model one includes basic demographic controls and shows that as age increases, college expectations also decrease (OR=.84, $p<.001$),

females are more likely to expect to go college (OR=1.64, p<.001), and Asian Americans (OR=5.47, p<.001).

(Table 2 about here)

Model 2 introduces the community and school level controls. Those respondents who reside in communities where greater than 75% of the populations owns their hose are more likely to expect to attend college (OR=1.36, p<.05). Poverty and ethnic dispersion are not significantly associated with college expectations. There is a graded relationship between the proportion of the population without high school degrees and college expectations. Compared to those respondents who reside in neighborhoods with 20% or less of the population does not have a high school degree, there's a negative relationship increasing proportions without high school degrees and college expectations. School mean levels of college expectations are also important predictors of expectations; the lowest quartile is 71% less likely to report high college expectations compared to those respondents in the highest quartile. The inclusion of these variables also reduces the level one variance in the model by over 50%. Model three includes additional covariates measured at the individual level. Parent education (OR=1.29, p<.001), attachment to school (1.31, p<.001), and attachment to neighborhood (OR=1.10, p<.001) are all positively and significantly related to college expectations, and depression (OR=.95, p<.001) has a significant negative relationship. While the inclusion of these variables improves model fit, previous community and school level variables that were significantly associated with college expectations in Model 2 persist.

Predicting College Achievement

Table 3 reports the odds ratios derived from multivariate logistic regressions with random slopes for the effects of college expectations and contextual measures reported in Wave I on educational outcomes, reported in Wave IV. We examine the relationship between these variables and both reporting some college and having graduated from college and acquiring a bachelor degree.

(Table 3 about here)

Model one of the analysis of some college completion shows a positive and significant relationship between expecting college and completing some college (OR=6.11, p<.001). In model two, after controlling for neighborhood and school level factors, the relationship between expectations and some college attainment persists (OR=5.75, p<.001). Moreover, neighborhood characteristics during adolescence continue to have an important influence on college attendance in young adulthood. Indeed, the proportions of people owning their house, living below the poverty line, and without high school degrees are all statistically significant predictors of some college achievement. The mean level of college expectation within a respondent's school is also critical as those respondents in the three lower quartiles are roughly 50% less likely to complete some college. Model three introduces individual level variables into the analysis and reduces the magnitude of the expectations coefficient 32% from model two, it however remains positive and significant (OR=4.22, p<.001). The proportions of persons without high school degrees in a respondent's census block, respondents' school mean expectations, parent education, attachment to school and depression scores reported in Wave I are related to some college attendance.

In the second portion of the table, we change our dependent variable to college completion. In model 1, college expectations have a large effect on college completion, every one point increase in the five point scale results in a 10.5 fold increase in the odds of completing college. The inclusion of contextual variables does not mediate the relationship between college

expectations and completion; they do however have significant independent effects on college completion. All neighborhood characteristics have significant impacts on college completion in the expected direction. For example, those respondents who reside in a neighborhood where 60% or more of the population does not have a high school degree are 51% less likely to complete college. School mean levels of expectation are also critical for college completion; respondents in the lowest quartile are 46% less likely to complete college. Model three introduces covariates measure at the individual level. While the impact of college expectations is reduced 41% from the previous model, it still remains an important predictor of college complete (OR=6.26, p<.001). Additionally, parent's education (OR=1.40, p<.001), satisfaction with the relationship with their mother (OR=1.12, p<.01), school attachment (OR=1.19, p<.001), and depression scores (OR=.96, p<.001) also influence the likelihood of completing college.

DISCUSSION AND CONCLUSION

Previous work has examined the impact of neighborhood-level context on educational outcomes, but the relationship between context, expectations and college completion has not previously been explored. To this end, we build on a family-process model and use two waves of Add Health data to begin our exploration of the relationship between Wave I neighborhood context and Wave IV educational attainment. First, we find significant differences between college outcomes among those with high and low educational aspirations. Second, we find that both school-level and neighborhood level variables are associated with educational aspirations. Finally, we find that neighborhood and school-level variables mediate the relationship between college aspirations and college outcomes, and continue to have robust associations with educational outcomes above and beyond individual level charactheristics.

Educational aspirations and attainment are critical predictors of future life success and are stratified by demographic characteristics. Residential location has been shown to be an influential source of inequality that shapes peer groups, parental expectations, and community role-models. Educational aspirations continue to be shaped by socioeconomic status and material resources. Educational attainment also varies dramatically by race/ethnic group and nativity status (Everett et al. 2007). Educational aspirations continue to not only impact income and occupational prestige, but a variety of sociodemographic, physical, and psychological outcomes including divorce, incarceration, feelings of self-efficacy and personal mastery (Chiswick, Lee, and Miller 2003; DiPrete and Buchmann 2006; Link and Phelan 1995; Lochner and Moretti 2004; Martin and Bumpass 1989; Mirowsky and Ross 1998; Pettit and Western 2004). Even though neighborhoods, schools, and peer groups are constantly in transition (Urberg, Degirmencioglu, Tolson, and Halliday-Scher 1995), we continue to find residual effects from earlier childhood conditions. Educational outcomes and the attainment of college degrees are part of a cumulative effect of past and current neighborhood, peer, and school contexts. Importantly, we suggest that educational expectations serve as a proxy for not only aspiration, but also what the individual thinks is actually possible for their future.

Table 1: Per cent distribution of variables for total population and by college expectations at WI

	Total Pop	Low Expectations N=1,016		High Expectations N=10,501
Expect to attend college	91.76%			
Age	15.79	16.26	***	15.74
Female	52.90%	41.60%		54.05%
Male	47.10%	58.40%		45.95%
Race/Ethnicity				
White	70.58%	70.94%		70.55%
Non-Hispanic black	14.01%	14.40%		13.97%
Hispanic	10.62%	12.96%		10.38%
Asian	3.32%	0.70%	***	3.59%
Other	1.47%	1.00%		1.51%
Census Block Level Variables				
Own House				
<50%	15.55%	18.12%		15.39%
≥ 50% & < 75%	32.37%	35.71%		31.92%
> 75%	52.08%	46.17%	*	52.69%
Proportion below poverty line				
< 10%	53.42%	40.30%	**	53.76%
≥ 10% & < 20%	22.38%	24.95%		23.12%
≥ 20%	24.20%	34.75%	***	23.12%
Proportion w/o high school degree				
<20%	36.96%	21.62%	***	38.51%
≥ 20% & <40%	42.77%	48.12%	*	42.23%
≥ 40% & < 60%	15.61%	22.22%	***	14.94%
≥ 60%	4.66%	8.04%	**	4.32%
Race/ethnic dispersion				
< 40%	75.06%	73.09%		75.26%
≥ 40% & < 60%	12.98%	14.89%		12.79%
≥ 60%	11.96%	12.02%		11.95%
School Level Variable				
Expect to attend college				
>75%	28.05%	11.21%	***	29.77%
≤75% to >50%	25.83%	19.17%	**	26.51%
<50% to >25%	19.93%	22.93%		19.62%
<25%	26.19%	46.69%	***	24.10%
Individual Level Variables				
Parents' years of education	13.19	11.79	***	13.33
Satisfaction with parent relationship	4.31	4.17	***	4.32
Neighborhood attachment	4.77	4.44	***	4.81
School attachment	4.65	4.27	***	4.68
CESD-19 scale	6.37	8.14	***	6.19
Wave IV Dependent Variables				
Some college	66.65%	25.83%	***	70.81%
College degree	33.04%	4.23%	***	35.98%

* p<.05; ** p<.01; *** p<.001

Results control for complex survey design using "svy" commands in Stata 9.0

Source: National Longitudinal Study of Adolescent Health

Table 2: Odds ratios for high college expectations derived from multivariate logistic regressions .

	Mod 1	Mod 2	Mod 3	Mod 4
Age	0.84 ***	0.87 ***	0.88 ***	0.90 ***
Female	1.64 ***	1.67 ***	2.05 ***	2.06 ***
Race/Ethnicity (ref non-Hispanic white)				
Non-Hispanic black	1.16	1.37	1.39	1.46 +
Hispanic	0.76	0.97	1.48 *	1.61 *
Asian	5.47 ***	6.03 ***	8.67 ***	8.76 ***
Other	1.50	1.79	1.80	1.80
Own House (ref <50%)				
≥ 50% & < 75%		1.19		1.07
> 75%		1.36 *		1.24 †
Proportion below poverty line (ref< 10%)				
≥ 10% & < 20%		0.91		1.03
≥ 20%		0.94		1.06
Proportion w/o high school degree (ref < 20%)				
≥ 20% & <40%		0.69 **		0.79 †
≥ 40% & < 60%		0.57 ***		0.73 *
≥ 60%		0.46 ***		0.70 †
Race/ethnic dispersion (ref < 40%)				
≥ 40% & < 60%		0.87		0.92
≥ 60%		1.13		1.14
School mean college expecations				
lt 25%		0.21 ***		0.29 ***
25 to 50%		0.33 ***		0.45 ***
gt 50%		0.48 ***		0.57 *
Parent Education			1.32 ***	1.29 ***
Relationship with teen			1.06	1.07
Neighborhood attachment			1.11 ***	1.10 ***
School attachment			1.32 ***	1.31 ***
Depression			0.95 ***	0.95 ***
-2 log likelihood	-3364	-3286	-3096	-3055
Variance level 1	0.52	0.25	0.37	0.28

† p ≤ .10.; * p ≤ .05; ** p ≤ .01; *** p ≤ .001
Results control for complex survey design using "svy" commands in Stata 9.0
Source: National Longitudinal Study of Adolescent Health

Table 3. Odds ratios for college attendance derived from multivariate logistic regression with random slopes

	Some College			Graduated College		
	Mod 1	Mod 2	Mod 3	Mod 1	Mod 2	Mod 3
Expect to attend college	6.11 ***	5.75 ***	4.22 ***	10.49 ***	9.87 ***	6.26 ***
Age	1.00	1.01	1.04 †	1.01	1.02	1.07 ***
Female	1.63 ***	1.63 ***	1.93 ***	1.46 ***	1.49 ***	1.75 ***
Race/Ethnicity (ref non-Hispanic white)						
Non-Hispanic black	0.73 **	0.91	0.97	0.56 ***	0.70 **	0.80 †
Hispanic	0.59 ***	0.70 ***	1.17	0.53 ***	0.68 ***	1.08
Asian	1.70 **	1.84 ***	2.16 ***	1.95 +	2.23 ***	2.49 **
Other	0.76	0.84	0.98	0.60 ***	0.74	0.82
Census level variables						
Own House (ref <50%)						
≥ 50% & < 75%		1.01	0.95		1.09	1.02
> 75%		1.23 *	1.20		1.25 *	1.15
Proportion below poverty line (ref< 10%)						
≥ 10% & < 20%		0.82 **	0.90		0.73 ***	0.81 *
≥ 20%		0.84 †	0.92		0.74 ***	0.84 †
Proportion w/o high school degree (ref < 20%)						
≥ 20% & <40%		0.70 ***	0.85 *		0.79 **	0.99
≥ 40% & < 60%		0.57 ***	0.77 *		0.57 ***	0.82 †
≥ 60%		0.43 ***	0.64 *		0.49 ***	0.70 †
Race/ethnic dispersion (ref < 40%)						
≥ 40% & < 60%		0.91	0.92		0.71 ***	0.74 **
≥ 60%		0.99	1.00		0.76 *	0.77
School level variables						
Expect to attend college (ref >75%)						
<75% to >50%		0.55 ***	0.66 **		0.50 ***	0.58 ***
<50% to >25%		0.56 **	0.67 ***		0.49 ***	0.54 ***
<25%		0.55 ***	0.62 ***		0.54 ***	0.62 ***
Individual level variables						
Parents' years of education			1.35 ***			1.40 ***
Satisfaction with parent relationship			1.01			1.12 **
Neighborhood attachment			0.98			1.03
School attachment			1.08 *			1.19 ***
CESD-19 scale			0.95 ****			0.96 ***
-2 log likelihood	-6424	-6321	-5916	-6352	-6207	-5701
Level 1 variance	0.42	0.35	0.29	0.42	0.40	0.37

p ≤ .10.; * p ≤ .05; ** p ≤ .01; *** p ≤ .001

Results control for complex survey design using "svy" commands in Stata 9.0

Source: National Longitudinal Study of Adolescent Health

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