DOCUMENT RESUME

ED 389 709 TM 023 836

AUTHOR	Myers, David; And Others
TITLE	Students' School Transition Patterns between 8th and 10th Grades, Based on NELS:88. National Education Longitudinal Study of 1988.
INSTITUTION	Mathematica Policy Research, Washington, DC.
REPORT NO	ISBN-0-16-045644-4; NCES-95-137
PUB DATE	Apr 95
NOTE	78p.
AVAILABLE FROM	U.S. Government Printing Office, Superintendent of Documents, Mail Stop SSOP, Washington, DC 20402-9328.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Academic Achievement; *Change; Family Characteristics; *Followup Studies; Grade 8; Grade 10; High Schools; *High School Students; Junior High Schools; Junior High School Students; National Surveys; Private Schools; Public Schools; *School Choice; Socioeconomic Status; *Student Characteristics
IDENTIFIERS	*National Education Longitudinal Study 1988; *Transition Time

ABSTRACT

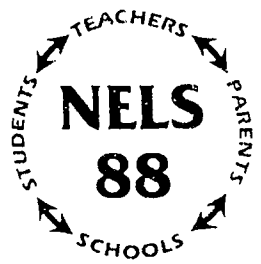
This study is based on the National Education Longitudinal Survey of 1988 (NELS:88) sponsored by the National Center for Education Statistics. NELS:88 is a nationally representative sample of approximately 25,000 eighth graders who were enrolled in public or private school in 1988. About 21,000 students were resurveyed in 1990, a second follow-up was completed in 1992, a third follow-up was completed in 1994, and one more additional follow-up interview is planned for 1998. NELS:88 provides a wealth of information on students as they progress through the school system, including information collected from their parents, teachers, and school principals. This study examined the characteristics of students who switched between school sectors (public to private, or private to public) as they moved from 8th to 10th grade. Variables were examined in the following categories: (1) student and family background; (2) parent involvement; (3) academic achievement and educational expectations; (4) characteristics of the student's school; and (5) parental satisfaction with the school. Families of high socioeconomic status were more likely to shift to private schools, as were Catholic students. Females were more likely to shift to public school than were males, but there was no significant association between student race and ethnic background and the likelihood of shifting between school sectors. Appendixes describe the data and methodology and give sample size tables. Eight text tables and 9 appendix tables present study information. (Author/SLD)

TM

NATIONAL CENTER FOR EDUCATION STATISTICS

National Education Longitudinal Study of 1988

Students' School Transition Patterns Between 8th and 10th Grades, Based on NELS:88

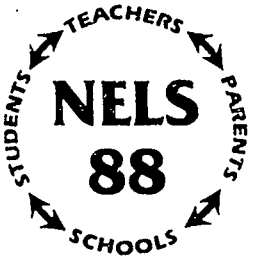


U.S. Department of Education
Office of Educational Research and Improvement
NCES 95-137

NATIONAL CENTER FOR EDUCATION STATISTICS

National Education Longitudinal Study of 1988

Students' School Transition Patterns Between 8th and 10th Grades, Based on NELS:88



David Myers
Nancy Heiser
Mathematica Policy Research, Inc.

Shi-Chang Wu, Project Officer
National Center for Education Statistics

U.S. Department of Education
Office of Educational Research and Improvement NCES 95-137

U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
Sharon P. Robinson
Assistant Secretary

National Center for Education Statistics
Emerson J. Elliott
Commissioner

National Center for Education Statistics

"The purpose of the Center shall be to collect, and analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

April 1995

Contact:
Jeffrey Owings
(202) 219–1777

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-045644-4

Foreword

This study is based on the National Education Longitudinal Survey (NELS:88) sponsored by the U.S. Department of Education's National Center for Education Statistics. NELS:88 is a nationally representative sample of approximately 25,000 eighth-graders who were enrolled in public and private schools across the nation in 1988. About 21,000 students were resurveyed in 1990, a second follow-up was completed in 1992, a third follow-up was completed in 1994, and one more follow-up interview is planned for 1998. NELS:88 provides a wealth of information about students as they progress through the school system, including information collected from their parents, teachers, and school principals.

This study examined the characteristics of students who switched between school sectors (public to private, or private to public) as they moved from 8th to 10th grade. Five sets of variables were examined to estimate the association between students' transition patterns and the following student, school, and family characteristics: (1) student and family background characteristics; (2) the amount of parental involvement in the student's education; (3) the student's academic achievement and educational expectations; (4) the characteristics of the student's school; and (5) parental satisfaction with the student's school. The findings of this study should be useful to parents, educators, and policymakers as they debate proposals for reforming the nation's schools.

Paul Planchon
Associate Commissioner
Elementary/Secondary Education Statistics Division
National Center for Education Statistics

Acknowledgments

This report was prepared under the direction of Shi-Chang Wu and Jeffrey Owings of the Longitudinal and Household Studies Branch, Elementary/Secondary Education Statistics Division. The authors thank them for their guidance and valuable contributions. The authors also thank the reviewers of the report, including NCES staff members Bob Burton, Edith McArthur, John Burkett, Andy Kolstad, Ralph Lee, and Sue Ahmed, Peggy Quinn, Will Jordan of the Center for Research on Effective Schooling for Disadvantaged Students, in the Department of Sociology, at Johns Hopkins University, and Jomills Henry Braddock II of the Department of Sociology, at Miami University. The comments and suggestions of these reviewers are greatly appreciated and are reflected in the report.

The authors thank John Tuma and Ellen Liebman of MPR Associates for providing programming support, and Ruth Harris, Rhonda Young, Sharon Nelson, and Brenda Wade of NCES who contributed to the final preparation of this report.

Highlights

This study examines the characteristics of the students who shifted between the public and private school sectors between grades 8 and 10, using data from the 1988 National Education Longitudinal Study of eighth-graders (NELS:88). Five sets of variables were examined to estimate the association between students' transition patterns and the following student, family, and school characteristics: (1) student and family demographics; (2) parent involvement in students' education; (3) students' academic performance and educational expectations; (4) characteristics of the eighth grade school attended, and (5) parents' satisfaction with the eighth grade school.

Demographic Variables

- Students from families with high socioeconomic status (SES) and who attended a public school in the eighth grade were more likely to shift to a private high school than other students. Furthermore, students from high SES families who attended private schools were more likely to continue in the private school sector between grades 8 and 10 than students from lower SES families.

- There was not a significant association between students' race and ethnic background and the likelihood of shifting between the public and private school sectors.

- Catholic students were more likely to shift from a public to a private school than students from other religious backgrounds.

- Females were more likely to shift from a private school to a public school than were males.

Effects Of Other Characteristics After Controlling For Demographic Characteristics

After adjusting for differences in selected demographic characteristics, the following groups of students were observed to be affected in their transition patterns by other characteristics:

- Public school students whose parents regularly talked to them about their school experiences were less likely to shift to a private school than those whose parents did not. Among private school students, those who regularly spoke with their parents about school experiences, and whose parents belonged to the PTA or attended school meetings, were more likely than other students to remain in the private sector for high school.

- Private school students who expected to attain at least a college degree were more likely to remain in the private school sector than those who expected to complete high school only.

- Public school students whose parents were satisfied with the emphasis placed on learning by the students' eighth grade schools were less likely to leave the public school sector than those whose parents were dissatisfied with the eighth grade school.

Contents

Appendices

List of Tables

Appendix Tables

Appendix Tables **Page**

Chapter 1

Introduction and Overview of Relationships Between Demographic Factors and Students' Transitions

For the past decade, parents, educators, and policymakers have debated about the role of private schools in the nation's education system. Advocates for private schools have argued, for example, that private schools produce students with higher academic achievement than that of comparable students in public schools, particularly for students from disadvantaged backgrounds. Furthermore they suggest that private schools provide a safer environment than public schools. Opponents of private schooling have expressed concern that private schools perpetuate socioeconomic and racial segregation and that the observed benefits associated with private school attendance merely reflect differences in the students enrolled in the public and private sectors.

Using data collected through the National Education Longitudinal Study of eighth graders (NELS:88) by the National Center for Education Statistics (NCES), this study explores the relationships between student and family characteristics and the likelihood of shifting between public and private schools as students progress from 8th grade to 10th grade. The examination of NELS:88 reported here focuses on four research questions:

1. How many students shift between the public and private school sectors? How many students shift from one private school to another?

2. Who shifts between sectors? Are family background factors, parental involvement, or students' academic achievement or educational expectations associated with variations in transition patterns?

3. Are school characteristics associated with students' propensity to move between school sectors?

4. Do parents who are dissatisfied with their children's school shift their children to another type of school?

These questions create the framework for this report. Chapter 2 describes the transition patterns of students, and student and family background characteristics. The remaining chapters examine the relationship between these transition patterns and the following sets of variables: (1) the amount of parental involvement in the student's education; (2) the student's academic achievement and educational expectations; (3) the characteristics of the student's school; and (4) parental satisfaction with the student's school. Measurements of each of these variables along with student and family background characteristics were obtained while students were in the eighth grade - that is before students' transition between school sectors. A discussion of the findings is included in Chapter 7.

Chapter 2

Demographic Background Factors

Previous studies have shown that family socioeconomic status and other background characteristics are correlated with private school enrollment (Coleman, Hoffer, and Kilgore, 1982). However, there is little research that examines the relationship between family background and the chances of shifting between school sectors (see Coleman and Hoffer 1987 for a limited analysis). This chapter presents an analysis of the association between seven student and family characteristics and students' transitions from public or private middle schools to private or public high schools.[1] The background factors include family socioeconomic status (SES), place of residence, region of residence, race and ethnic background, religious background, gender, and students' age.

The Context

Of the nearly three million eighth grade students in 1988, 88 percent attended public schools and 12 percent attended private schools (table 2.1). More than one-half of those attending private schools attended Catholic schools, one-fourth attended other religious schools, and the remaining students attended nonreligious private schools. Looking at the same students 2 years later shows that about 180,000 students (6 percent) were no longer enrolled in school. Closer examination of students' transitions reveals that 7 percent of public school students and less than 1 percent of private school students dropped out of school. While students enrolled in public schools were more likely to drop out of school than students in private schools, the distribution of students from the two school sectors in the 10th grade closely resembled the distribution of all eighth-graders. Furthermore, few of the public school students who remained in school changed sectors; that is, about 2 percent of public school students opted to attend a private high school (table 2.2). In contrast, more than one-third of the private school students shifted to a public high school.

Background Factors and Between-Sector Transitions

Table 2.3 shows the relative chances of selected subgroups[2] of students shifting from public schools to private schools between grades 8 and 10. Odds ratios are presented to show the relative chances of two groups of students shifting from one type of school to another. For example, the odds that public school students from high SES families shifted to a private high

---

[1]For purposes of this report we refer to all students as attending middle schools in 1988. Actually, NELS:88 is a sample of students in grade 8 in 1988 and not all students attended a middle school.

[2]Given the small number of students making moves to specific types of private schools (for example, nonreligious private schools), we have aggregated all private schools into a single category. Clearly, this group is dominated by the number of students enrolled in Catholic schools (see table 2.1). For more information on students in specific types of private schools, see NCES publications "A Profile of the American Eighth-Grader" and "A Profile of Schools Attended by Eighth-Graders in 1988."

Table 2.1.—Distribution of students in 8th and 10th grades

Type of school	8th grade		10th grade	
	Thousands	Percent	Thousands	Percent
Total	2,991	100.0	2,993	100.1
Public school	2,630	87.9	2,527	84.5
Private school	361	12.1	284	9.5
Catholic	229	7.7	170	5.7
Other religious	86	2.9	78	2.6
Nonreligious	46	1.5	36	1.2
Not enrolled	0	0.0	182	6.1

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

Table 2.2.—Students' school transitions

Type of 8th grade school	10th grade school					
	Total (Thousands)	Public	Private			
			All	Catholic	Other religious	Non-religious
Total	2,809	89.9%	10.1%	6.1%	2.7%	1.3%
Public school	2,451	97.9%	2.1%	1.1%	0.5%	0.4%
Private school	358	35.0%	65.0%	39.7%	17.7%	7.6%

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

Table 2.3.—Odds ratios of students switching school sectors, by background characteristics

Variable	Public school eighth-graders: Odds ratios of switching to a private school	Private school eighth-graders: Odds ratios of switching to a public school
SES		
High vs. low	11.27*	0.37*
High vs. medium	2.14*	0.50*
Metropolitan status		
Urban vs. rural	1.73	0.98
Urban vs. suburban	0.86	0.51
Region		
West vs. Northeast	0.55	0.58
West vs. Midwest	1.05	0.24*
West vs. South	0.97	0.79
Parents' religion		
Other religious vs Catholic	0.48*	0.90
Other religious vs. nonreligious	0.60	7.27*
Race/ethnicity		
White, non-Hispanic vs. black, non-hispanic	2.76	1.22
White, non-Hispanic vs. Hispanic	2.38	1.10
Gender		
Male vs. female	1.26	0.59*
Age		
Over 14.5 vs. 13.5–14.5	0.56	1.67
Over 14.5 vs. under 13.5	0.68	1.58

*Indicates that the logit coefficient is statistically significant at the .05 level.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

school were .04216, and the odds that students from low SES families shifted to a private school were .00374. The odds ratio comparing the relative chances of high SES students and low SES students switching from the public to the private sector was .04216 : .00374, or approximately 11.27. That is, the odds were more than 11 times greater that a high SES public school student would move to a private high school than would a low SES student.[3] A more detailed discussion of the data and methodology is presented in Appendix A.

Among the demographic background factors examined in this report, family socioeconomic status stands out in terms of its relationship to the chances of shifting from a public school to a private high school. Students in the upper end of the SES distribution were more likely to leave public education than students in the middle and lower ends of the distribution [odds ratios are 2.14 and 11.27, respectively]. The only other background factor significantly associated with shifting from a public to a private school was parents' religion. Students from a non-Catholic, religious background were less likely to move from a public school to a private school than Catholic students [odds ratio is .48]. Catholic students were almost twice as likely to leave public middle schools as students classified as "other religious." None of the remaining factors—metropolitan status, region of residence, race/ethnicity, gender, or students' age—were significantly associated with making a transition from a public to a private school.

For students who attended private schools in the eighth grade a different picture emerges. Family socioeconomic status, region of residence, religious status, and gender were each significantly associated with shifting from a private to a public school. Metropolitan status, race and ethnic background, and students' age were not significantly associated with the chances of leaving the private school sector. In contrast to the results for public school students, table 2.3 shows that high SES students were more likely to continue in the private sector than students from lower SES families. The likelihood of a high SES student shifting from a private school to a public high school was less than one-half as large as for a student from a low SES family [odds ratio = .37]. Similar results were obtained when high SES students were contrasted with students in the middle of the SES distribution [odds ratio = .50]. Differences in the likelihood of leaving the private school sector may, in part, reflect the importance of cost as a factor in choosing schools (Lankford and Wyckoff, 1992) because the cost of a private education increases substantially as students progress through school. The average tuition at private high schools in the late 1980s was $2,552, about $1,200 higher than the average tuition of $1,357 at private elementary schools (U.S. Department of Education, 1992).

Analysis of the other background factors shows that students living in the Midwest were more likely to leave the private school sector than those in the West [odds ratio = .24]. Students from a non-Catholic (other religious) background were more likely to shift from a private school to a public high school than those who reported "no religion" [odds ratio = 7.27]. Females were

[3]The odds ratios are not equivalent to the ratio of two proportions. For example, the proportion of high SES students making the transition to private high schools is .04046 and the proportion of low SES students making the same transition is .00373. The ratio of the proportion of high SES to low SES students is 10.85, while the odds ratio for the same comparison is 11.27.

almost twice as likely as males to make the transition from private schools to public high schools (odds ratio = .59). To examine the net impact of the demographic variables on students' transitions between school sectors, some of the background factors shown in table 2.3 were included in a statistical model for further analysis (table 2.4).[4] The statistical model is described in Appendix A. Terms such as *impact* and *effect* should not be taken as implying a causal relationship. Rather, they are used to suggest that the relative chances of shifting between sectors differ according to the weight of a given independent variable. This approach provides an estimate of the effect of each background variable on the relative chances of switching between school sectors, while removing the influence of other background variables.

The analysis showed that among public school students, the effects of family socioeconomic status and religion persisted. Students from the highest quartile of family socioeconomic status remained more likely to shift from public to private schools than students from the two middle quartiles (adjusted odds ratio=2.19) and the lowest quartile (adjusted odds ratio=15.22). Catholic students also remained more likely than non-Catholic students to shift from public to private schools (adjusted odds ratio=.49). These findings are not surprising since neither region nor gender was associated with public to private school transitions and we would not have expected that controlling for their effect would influence the observed relationship between family SES or religion and students' transitions. However, the results suggested that family socioeconomic status and religion each independently influenced the chances of leaving a public school for a private high school.

For private school students, the multivariate results were similar to the findings from analyses where no statistical controls were included. The one exception was the relationship between religion and the chances of leaving private school (odds ratio = 3.76). Here, the gap in the relative chances of shifting from a private middle school to a public high school decreased by almost one-half. The odds ratio without statistical controls was 7.27. After controlling for the other background factors the odds ratio was 3.76 and was no longer statistically significant. This result suggested that at least part of the relationship observed between religious background and the likelihood of shifting from a private school to a public high school was due to a complex multivariate relationship among the background factors included in the analysis - religion, family socioeconomic status, region, gender - and their association with private school students' transitions.

[4]Given the exploratory nature of this analysis, we chose an empirically based strategy to identify variables that would be included as independent variables in the statistical models. Only those background factors found to have a significant association with the relative chances of shifting either from the public sector to the private, or from the private sector to the public, were included in the analyses.

Table 2.4.—Adjusted odds ratios of students switching school sectors, by background characteristics

Variable	Public school eighth-graders		Private school eighth-graders	
	Odds ratios of:	Adjusted odds ratios of †:	Odds ratios of:	Adjusted odds ratios of †:
	Switching to a private school		Switching to a public school	
SES				
High vs. low	11.27*	15.22*	0.37*	0.38*
High vs. medium	2.14*	2.19*	0.50*	0.58*
Region				
West vs. Northeast	0.55	0.59	0.58	0.61
West vs. Midwest	1.05	0.91	0.24*	0.25*
West vs. South	0.97	0.76	0.79	0.80
Parents' religion				
Other religious vs. Catholic	0.48*	0.49*	0.90	1.19
Other religious vs. nonreligious	0.60	0.46	7.27*	3.76
Gender				
Male vs. female	1.26	1.15	0.59*	0.58*

†Odds ratios with student's socioeconomic status, gender, region of residence, and parents' religion as independent variables concurrently in the logit model.

* Indicates that the logit coefficient is statistically significant at the .05 level.

Note: High = Students classified in the high quartile on socioeconomic status.
Medium = Students classified in the middle two quartiles on socioeconomic status.
Low = Students classified in the low quartile on socioeconomic status.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

Chapter 3

Parental Involvement and Students' Transitions From 8th to 10th Grade

Parental involvement is often considered to be one of the most important indicators for predicting students' success in school. Involvement may reflect the importance parents place on education and the encouragement students receive to excel in school. Previous analyses suggest that parental involvement may be greater in private schools and that this difference may account for part of the observed students' outcomes (see, for example, Coleman, Hoffer, and Kilgore 1982).

This chapter examines the relationship between parental involvement and the chances of students switching between the public and private school sectors as they progress from 8th grade to 10th grade. Four indicators of parental involvement during 8th grade are analyzed in this chapter: (1) how often parents discussed students' school experiences; (2) how often parents talked to students about their plans for high school; (3) whether parents belonged to the PTA; and (4) whether parents attended school meetings. Our original plan called for a wider range of items concerning parental involvement. Some of these were how often parents help students with homework, how often parents talked to students about their plans for after high school, and whether parents volunteered at schools. When preliminary analyses showed that none of these items had a statistically significant association with the likelihood of students shifting between school sectors, the items were excluded from further analyses.

Results: Bivariate Odds Ratios

Public school students whose parents were involved in their education in two particular areas were more likely than other students to shift from public schools to private high schools (table 3.1). The likelihood of shifting to a private high school for students who spoke with their parents regularly about their plans for high school was 1.8 times greater than for students who rarely spoke with their parents about this topic (odds ratio = 1.81). The likelihood of shifting to a private school for students whose parents belonged to the PTA was more than two times greater than for students with parents who did not belong to the PTA (odds ratio = 2.12).

Private school students whose parents were actively involved in their education were more likely to remain in the private school sector and not shift to public high schools. In the case of three of the four indicators of parental involvement—talking about school experiences, belonging to the PTA, and attending school meetings—students whose parents were involved in their education were about one-half as likely to move to a public high school as students whose parents were less involved (odds ratio =.40, .48, .47).

Table 3.1.—Odds ratios and adjusted odds ratios of students switching school sectors, by parental involvement

	Public school eighth-graders		Private school eighth-graders	
	Odds ratios of:	Adjusted odds ratios of †:	Odds ratios of:	Adjusted odds ratios of †:
Variable	**Switching to a private school**		**Switching to a public school**	
How often parent talks to student about school experiences				
Regularly vs. rarely	0.74	0.48*	0.40*	0.50*
How often parent talks to student about plans for high school				
Regularly vs. rarely	1.81*	1.70	0.84	0.90
Parent belongs to the PTA				
Yes vs. no	2.12*	1.31	0.48*	0.55*
Parent attends school meetings				
Yes vs. no	1.36	1.06	0.47*	0.49*

†Odds ratios after controlling for the student's socioeconomic status, gender, region of residence, and parents' religion.

* Indicates that the logit coefficient is statistically significant at the .05 level.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

Results: Adjusted Odds Ratios

To assess whether parental involvement is significantly associated with school transition patterns independent of other influences, family and student background factors were added to the model.[5] The background factors added were family socioeconomic status, region of residence, religious affiliation, and students' gender (that is, those factors found to be significantly associated with school transitions as described in chapter 2). This multivariate model isolates the association between school transitions and parental involvement when the influences of background factors are taken into account.

For public school students, after adjusting for differences in background characteristics, how often parents talked to their children about their plans for high school and whether parents belonged to the PTA were no longer significantly associated with school transitions (at conventional statistical levels). This finding suggests that, in part, the observed association between the indicators of parental involvement and students' transitions reflects observed differences in family and student background characteristics rather than in parental involvement. That is, high SES families were more likely to be involved in their children's education, and these indicators of parental involvement alone—independent of the background variables included in the multivariate model—did not influence students' transitions.

Controlling for family and student background factors also changed the conclusion of the analysis regarding the relationship between how often parents talked to their children about their school experiences and students' school transitions. When control variables were not included in the analysis, this indicator of parental involvement was not significantly associated with the relative chances of leaving a public school for a private high school. However, once the differences in the background variables were taken into account, a statistically significant association was detected. The adjusted odds ratio (.48) showed that students whose parents spoke regularly with them about their school experiences were one-half as likely to shift to the private school sector as those who rarely spoke about their school experiences. A possible explanation for this finding may be that parents who talked regularly with their children about their school experiences were also satisfied with public schools. An alternative explanation may be that parents talked regularly with their children about their school experiences because the children had disciplinary problems or poor grades. These problems could serve as barriers to private school entry, and therefore reduce the chances of these students switching from a public school to a private school.

Adjusting for the differences in family and student background factors appears to have no significant effect on the results obtained for the bivariate analyses linking parental involvement to the likelihood of shifting to a public high school for private school students: the adjusted odds ratio of shifting from a private school to a public high school remained about one to two for

[5]Other unobserved factors may influence both parental involvement and the chances of shifting to a private school. To the extent that these factors exist, the estimated effects may be biased. Correcting for these unobserved selection effects is beyond the scope of work reported in this publication.

students whose parents were actively involved in the three aspects of their schooling found significant in the bivariate analysis (adjusted odds ratio=.50, .55, and .49).

Chapter 4

Student Characteristics and the Relative Chances of Shifting Between the Public and Private School Sectors

Some critics of private schools argue that the observed gains in private school students' performance over that of public school students result from private schools excluding those with less potential or low aspirations to succeed in school. This chapter examines the relationship between these two student characteristics and the likelihood of shifting between school sectors. The two factors of ability and aspirations indicated students' relative position in the achievement distribution and their expectations for the level of schooling they would complete.

Results: Bivariate Odds Ratios

Students in the top one-third of the achievement distribution were more than twice as likely than other students to shift from a public middle school to a private high school (odds ratio = 2.42 and 2.02) (table 4.1). This finding should not be surprising given that 59 percent of the private high school students in the NELS sample attended schools that used academic performance as an entrance criteria.[6] As might be expected, the odds ratio comparing students at the top of the achievement distribution to those at the bottom of the distribution was somewhat larger than that comparing the top students and those in the middle of the distribution: 2.42 and 2.02, respectively.

Students with high educational attainment expectations were more likely to move from a public school to a private high school. While the difference between expecting to complete college and high school was not statistically significant, the difference between expecting to complete college and completing less than 4 years of college was significant (odds ratio = 2.75). In both cases, it appeared that those who expected to complete a college degree were more than twice as likely to shift to a private high school than those who did not expect to complete a degree.

For private school students there appeared to be no relationship between academic performance and the chances of shifting to a public high school.[7] Contrasting students who expected to complete a college degree with those who expected to complete only some college produced an odds ratio of .41. This shows that the likelihood of shifting to a public high school for students who expected to complete college was about 40 percent as large as for students who expected to attend, but not complete college.

---

[6]This percentage was obtained from the follow-up school component item 57c and assumes that only private schools responded (public schools legitimately skipped the question).

[7]The point estimates suggest that higher achieving students tended to remain in private schools at a slightly higher rate than did lower achieving students.

Table 4.1.—Odds ratios and adjusted odds ratios of students switching school sectors, by student's academic achievement, and educational expectations

Variable	Public school eighth-graders		Private school eighth-graders	
	Odds ratios of:	Adjusted odds ratios of [1]:	Odds ratios of:	Adjusted odds ratios of [1]:
	Switching to a private school		Switching to a public school	
Academic achievement				
High vs. low	2.42*	1.63	0.76	0.84
High vs. medium	2.02*	1.55	0.84	0.99
Student's educational expectations				
College or beyond vs. high school only	2.20	1.90	0.61	0.52*
College or beyond vs. attend some college	2.75*	1.04	0.41*	0.76

[1]Odds ratios after controlling for the student's socioeconomic status, gender, region of residence, and parents' religion.

* Indicates that the logit coefficient is statistically significant at the .05 level.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

Results: Adjusted Odds Ratios

After adjusting for family and student background differences between groups of public school students (for example, high achieving and low achieving students), none of the bivariate relationships persisted. This finding suggests that the relationship between students' academic performance and students' expectations and the chances of shifting to the private school sector reflected differences in family socioeconomic status and other background factors and was not the direct effect of students' characteristics.

For private school students the results are not as clear. Here, the differences in the relative chances of shifting to a public high school for those who expected to complete college and for those who expected to complete less than 4 years of college were no longer statistically significant. However, the contrast between expecting to complete a college degree and expecting to complete a high school degree was statistically significant (odds ratio = .52). The odds were about 1:2, which indicated that those who expected to complete a college degree were one-half as likely to shift to a public high school as those who expected to complete only a high school degree.

Chapter 5

Characteristics of Eighth-Grade Schools and the Relative Chances of Shifting Between School Sectors

While little empirical research has examined the relationship between school characteristics and students' transitions between sectors, establishing this relationship is the linchpin for some advocates of public-private school choice policies. They argue that strong schools will attract students and weak schools will lose enrollment. This chapter examines the relationship between three indicators of school conditions and the relative chances of shifting between the public and private school sectors. The three indicators are: (1) whether a school emphasizes discipline; (2) whether teacher morale is high; and (3) the percentage of students in the school who receive a free or reduced-price lunch.

Results: Bivariate Odds Ratios

Among the three indicators of school conditions only teacher morale as reported by school administrators was significantly associated with the relative chances of a public school student shifting to a private high school (table 5.1). Students who attended public schools with low teacher morale were three and one-half times more likely to shift to a private high school than students who attended public schools with high teacher morale (odds = 3.53).

For students who attended a private school, the school's emphasis on discipline and low teacher morale were each significantly associated with the likelihood of shifting to a public high school. The odds ratio for students who attended schools that did not emphasize discipline in contrast to those in schools where discipline was emphasized a lot was .05. This odds ratio shows that students who attended schools where discipline was not emphasized were less likely to shift to a public high school than students who attended schools where it was emphasized. A similar finding holds when students who attended schools that placed a moderate emphasis on discipline were contrasted with those who attended schools with a strong emphasis. However, the likelihood of making a transition to a public high school is somewhat smaller (odds ratio = .37 - that is, closer to one).

In part, the emphasis on discipline may reflect underlying problems in these schools and not just school policy. Therefore, families may have shifted away from schools with disciplinary problems and not from schools that were highly structured and had strong policies concerning discipline. The data also show that students who attended schools with low teacher morale were more likely to shift to a public high school than those who attended schools with high teacher

Table 5.1.—Odds ratios and adjusted odds ratios of students switching school sectors, by principals' perceptions of school characteristics

	Public school eighth-graders		Private school eighth-graders	
	Odds ratios of:	Adjusted odds ratios of[1]:	Odds ratios of:	Adjusted odds ratios of[1]:
Variable	Switching to a private school		Switching to a public school	
School emphasizes discipline				
Not at all vs. a lot	3.03	2.74	0.05*	0.02
Somewhat vs. a lot	1.03	0.92	0.37*	0.39
Teacher morale is high				
Somewhat vs. a lot	0.85	0.92	0.54	0.42
Not at all vs. a lot	3.53*	3.58	1.42*	0.66
Percentage of students in a free or reduced-price lunch program				
High vs. medium	0.84	1.18	0.69	0.50
High vs. low	0.90	1.89	1.56	0.84

[1]Odds ratios after controlling for the student's socioeconomic status, gender, region of residence, and parents' religion.

* Indicates that the logit coefficient is statistically significant at the .05 level.

Note: Each principal of an eighth grade school was asked to respond ("not at all accurate for this school" to "very much accurate for this school") to a series of statements regarding school climate, including one on teacher morale "teacher morale is high". For this specific analysis, schools with low teacher morale were identified by principals whose answer was "not at all accurate for this school" and schools with high teacher morale were identified by principals whose answer was "very much accurate for this school".

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

morale (odds = 1.42).[8] Students who attended private schools where a moderate number of students participated in a free or reduced-price lunch program were more likely to shift to a public high school than those who attended schools with relatively fewer students in the program.[9]

Results: Adjusted Odds Ratios

After adjusting for differences in family and student characteristics none of the significant associations detected in the bivariate analysis persisted. This general finding suggests that, after statistically controlling for other prior factors such as family background characteristics, the school characteristics analyzed here had no relation to parents' decisions concerning transitions between the public and private school sectors. One interpretation of this finding is that students and families with particular characteristics were generally more likely to attend schools where teacher morale was high and discipline was emphasized. But, after controlling for the differences in family and student characteristics, the school characteristics did not have an independent effect on students' transitions.

---

[8]Each principal of an eighth grade school was asked to respond ("not at all accurate for this school" to "very much accurate for this school") to a series of statements regarding school climates, including one on teacher morale "teacher morale is high". For this specific analysis, schools with low teacher morale were identified by principals whose answers were "not at all accurate for this school" and schools with high teacher morale were identified by principals whose answer was "very much accurate for this school".

[9]Odds ratio = 2.26--this odds ratio was derived by taking (h/l)/(h/m); t =((.12 + .14)/.0332) = 7.83). In this study we have typically compared the excluded category with those included in the logit equation. In the case of free or reduced lunch programs, however, we conducted a more detailed analysis because the overall test of statistical significance suggested the presence of at least one difference in the likelihood of shifting to a public school, but none of the t-tests contrasting the excluded category with those in the equation were sufficiently large to reject the hypothesis of no effect

Chapter 6

Parents' Satisfaction With Eighth-Grade Schools and Students' Transitions to Public and Private High Schools

The previous chapter focused on the association between school environment and students' transitions between school sectors. This chapter takes a different approach and examines the relationship between parents' satisfaction with their children's schools and students' transitions to public and private high schools. To examine parental satisfaction we analyze parents' beliefs about three school characteristics: (1) the school placed a high priority on learning; (2) whether students were challenged in school; and (3) whether the school was a safe place.

Results: Bivariate Odds Ratios

Students who attended public schools that placed a low priority on learning or did not challenge students, as reported by their parents, were more likely to shift to a private high school than other students (table 6.1). The likelihood of a student shifting from a public school to a private school was 2.3 times greater if the school attended in the eighth grade placed a low priority on learning (odds ratio = 2.31). Similarly, the chances of a student moving from the public to the private school sector were 1.9 times greater if the school did not challenge students (odds ratio = 1.89). Parents' perceptions of school safety apparently had no influence on students' transitions. For private school parents, satisfaction with the emphasis placed on learning, the extent to which students were challenged, and school safety were uncorrelated with the likelihood of students shifting to public high schools.

Results: Adjusted Odds Ratios

The adjusted odds ratios for public school students showed that, after adjusting for differences in family and student background factors, only the relationship between the emphasis placed on learning and public school students' transitions to private high schools persisted (odds ratio = 2.85). For private school students no association was detected between the indicators of parental satisfaction and the likelihood of shifting to a public high school.

The general lack of importance of parental satisfaction with public schools on students' transition patterns, after adjusting for differences in family background, suggests that students with specific family characteristics are more likely to attend schools perceived to be more challenging and to place a high priority on learning. It is family characteristics and not parents' perceptions about schools that influence decisions regarding shifts between school sectors.

Table 6.1.—Odds ratios and adjusted odds ratios of students switching school sectors, by parents' satisfaction with student's school

	Public school eighth-graders		Private School eighth-graders	
	Odds of:	Adjusted odds of [1]:	Odds of:	Adjusted odds of [1]:
Variable	Switching to a private school		Switching to a public school	
School places a high priority on learning				
No vs. yes	2.31*	2.85*	1.34	1.45
The student is challenged				
No vs. yes	1.89*	1.75	1.30	1.35
The school is safe				
No vs. yes	0.95	1.28	2.33	1.77

[1]Odds ratios after controlling for the student's socioeconomic status, gender, region of residence, and parents' religion.

* Indicates that the logit coefficient is statistically significant at the .05.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

Chapter 7

Discussion

This report, using data from the NELS:88 Student Base Year and First Follow-Up surveys as well as the Parent and School Base Year Surveys, examines the association between family, student, and school factors and students' transitions between the public and private school sectors. Analysis of the family and student background factors showed that students from families with high socioeconomic status were more likely either to shift from a public school to a private school, or to remain in the private school sector than students from families with lower socioeconomic status. Catholic students were also more likely to leave the public school system for a private school. Perhaps a surprising finding concerns the experiences of white, black, and Hispanic students. No statistically significant relationship exists between these racial/ethnic variables and school transitions.

Other factors also were associated with the likelihood of students shifting between the public and private school sectors, after controlling for background characteristics:

- Public or private school students who spoke regularly with their parents about school experiences were less likely to move to a school in a different sector (either public or private). Private school students with parents who belonged to the PTA or who attended school meetings were more likely to stay in a private school.

- Private school students who had high educational expectations (expected college graduation or higher) also were more likely to persist in private school education than those who had low expectations (expected only high school graduation or lower).

- Public school students whose parents believed that the school did not emphasize learning were more likely to shift to a private high school than other students.

While a number of family, student, and school factors were associated with the chances of shifting between school sectors, the analyses reported here also suggest that much of any of the observed relationships may be a product of differences in family and student background factors—family socioeconomic status, region of residence, religious background, and gender. For example, analyses of the association between eighth grade school characteristics and students' transitions showed that, after adjusting for differences in family background, items such as school discipline and teacher morale were not significantly associated with the likelihood of students shifting between school sectors. While the analyses presented here are exploratory and the results are not definitive, the findings do suggest that decisions about switching school sectors are strongly linked to families' socioeconomic status. This finding is not particularly surprising given the relatively large difference in tuition and other costs between private elementary schools and private high schools.

References

Coleman, James S., and Thomas Hoffer (1987). *Public and Private High Schools: The Impact of Communities*. New York: Basic Books, Inc., Publishers.

Coleman, James S., Thomas Hoffer, and Sally Kilgore (1982). *High School Achievement: Public, Catholic, and Private Schools Compared*. New York: Basic Books, Inc., Publishers.

Lankford, Hamilton, and James Wyckoff (1992). Primary and Secondary School Choice Among Public and Religious Alternatives. *Economics of Education Review*, Volume 11, No. 4, pp. 317–337.

Levin, Henry M. (1991) The Economics of Educational Choice. *Economics of Education Review*, Volume 10, No. 2, pp. 137–158.

PC Carp, Statistical Laboratory, Iowa State University, Ames, IA, 1986.

Shah, Babubhai V., et al. *SUDAAN User's Manual, Release 6.0*. Research Triangle Institute 1991–1992.

U.S. Department of Education, National Center for Education Statistics (1992). "Schools and Staffing Survey, 1987–88", in *Digest of Education Statistics, 1992*, table 59. Washington; D.C: Author.

U.S Department of Education, National Center for Education Statistics. "A Profile of the American Eighth-Grader".

U.S. Department of Education, National Center for Education Statistics. "A Profile of Schools Attended by Eight-Graders in 1988".

U.S. Department of Education, National Center for Education Statistics. "National Education Longitudinal Study of 1988 (NELS:88), "Student Base Year and First Follow-Up" surveys, Parent and School Base Year Surveys.

Appendix A

Data and Methodology

Data

Estimates in this analysis were based on the responses of the eighth-graders surveyed in the National Education Longitudinal Study of 1988 (NELS:88). Three components of the NELS:88 database were used for the report: (1) the student base year and first follow-up files; (2) the base year parent file; and (3) the base year school file. The estimates in table 2.1 were based on the responses of all students who participated in the base year and first follow-up surveys (n=17,381). The estimates in table 2.2 were based on the responses of only those students who remained in school between grade 8 and grade 10 (n=16,616). For all other tables, the sample was restricted to students who remained in school and who responded to the specific items used in the analyses. For analyses that examined multiple independent variables simultaneously, the sample was restricted to students who had no missing data values for any of the variables included in the specific analysis.

All data were weighted by using the panel weight F1PNLWT. Appendix B shows the unweighted sample sizes for each of the variables used in the analysis.

Variables

All of the variables used in this report were taken directly from the restricted use version of the NELS:88 data files. The coding of the variables is shown in table A.1.

Methodology

Table 2.1 and table 2.2

The statistics reported in tables 2.1 and 2.2 are simple totals and percentages. The standard errors were computed by taking into account the complex sample design found in NELS:88. The standard errors are shown in tables A.2 and A.3.

Tables 2.3 through 6.1

The statistics reported in tables 2.3 through 6.1 are the simple odds ratios for each comparison listed. For example, the odds ratio for the transition from a public school to a private high school comparing high and low SES students was 11.27. This odds ratio can be calculated in the following manner:

1. The proportion of high SES students making the transition is .04046 and the proportion not making the transition is .95954; odds = .04046/.95954 = .04216. The proportion of low SES students making the transition to a private high school was .00373 and the proportion not making the transition was .99627; odds = .00373/.99627 = .00374.

2. The odds ratio of high SES students to low SES students is .04216/0.00374=11.27.

In simple terms, an odds ratio of 11.27 means that the odds of a high SES student making the transition from a public school to a private high school between grades 8 and 10 is 11.27 times greater than the odds of a low SES student making the same transition.

The odds ratios can be computed from a logit model as well as from simple proportions. The logit model is written as

$$\Pr(\text{event}) = 1/(1+e^{-X\beta})$$

where X is a vector of independent variables and β is a conformable vector of coefficients to be estimated. The odds of an event (for example, shifting from a public school to a private high school) can be derived by rewriting the logit model as

$$\frac{\Pr(\text{event})}{(1-\Pr(\text{event}))} = e^{X\beta}$$

The logit model can also be written as

$$\ln\left[\frac{\Pr(\text{event})}{(1-\Pr(\text{event}))}\right] = X\beta$$

where ln is the natural logarithm and the dependent variable--the log-odds of shifting between school sectors is now a linear function of the independent variables. In most cases it is easier to work with the odds and not the log-odds of a transition.

Given the definition of an odds ratio—the ratio of odds under two conditions—the relative effect of an independent variable can be generated. For example, using the logit model (with the coding as follows: transition = 1 if student shifted, 0 if student remained; when SES = high, SESH excluded, SESM = -1 and SESL= -1; when SES = medium, SESH excluded, SESM = 2 and SESL = -1; when SES = low, SESH excluded, SESM = -1 and SESL = 2) the odds ratio for a high to low comparison is written as

$$\frac{e^{-\beta_{SESL}}}{e^{2\beta_{SESL}}} = e^{-3\beta_{SESL}}$$

Taking the coefficient estimates for this model the odds ratio is computed as

$$e^{-3\times(-.8073)} = 11.27$$

The logit model can be extended to include multiple independent variables. The estimated coefficients for a logit model with two or more independent variables show the net effect of each variable on the relative chances of shifting between the public and private school sectors. The independent variables for each model included SES, region of residence, parents' religion, and students' gender plus one additional variable.

To assess whether a specific independent variable was associated with the chances of shifting between sectors, Wald statistics and t-statistics were computed. The Wald statistic was computed to assess the chances that the observed differences in the odds[10] of an event across three or more categories of an independent variable differed sufficiently to have occurred by chance alone (differences that would have occurred 5 percent or fewer times by chance alone were referred to as statistically significant in this report).[11] If one or more of the odds differed significantly, then a t-statistic was computed to assess which of the odds differed from the reference category. When an independent variable included only two categories, a simple t-statistic was computed to test the difference between the odds of one group shifting from one school sector to another and the odds of another group making the same transition.

Both unadjusted and adjusted odds ratios are presented in this report (see tables A.4 and A.5). The unadjusted odds ratios are derived from the simple logit models with a single independent variable—sometimes with multiple categories. The adjusted odds ratios are derived from logit models that include two sets of independent variables: (1) a set of control variables—family SES, region of residence, religious affiliation, and students' gender; and (2) a parental, student, or school variable of interest. The latter set of variables was selected after reviewing results based on the unadjusted odds ratios: independent variables that were not associated with the odds of shifting from a public middle school to a private high school, or from a private middle school to a public high school were not included in the logit models used to compute the adjusted odds ratios. After determining the set of control variables, a series of logit models was estimated. Each logit model included the control variables and one variable of interest at a time. The coding schemes for the variables used in the logistic regression analyses are provided in table A.6.

During the course of this work, two computer packages were used to estimate the logit models: (1) PC Carp (PC Carp, 1986) and (2) SUDAAN (Shah, 1992). Both procedures estimate the coefficients of the logit model using the method of maximum likelihood and take into account the complex sample design found in NELS:88.

---

[10]It would be more precise to say that tests were undertaken to examine differences in the log-odds and not the odds. The log-odds are a linear function of the logit coefficients and the odds are a nonlinear function of the logit coefficients.

[11]Actually, the test statistics focus on the logit coefficients and not directly on the odds ratios. Efforts were undertaken to compute the standard errors of the odds ratios and the adjusted odds ratios using the delta method. This approach produced results which were inconsistent with the results obtained by directly performing tests on the logit coefficients. Both a first order approximation and a second order approximation were used when applying the delta method.

Table A.1.—Variables used in this report

Variable description	Variable name and survey	Original coding	Recoding
School type variables: Tables 2.1, and 2.2, and others			
8th grade school type	G8CTRL1 Base year school survey	Composite variable from BYSC4 1=Public school 2=Catholic school 3=Private school, other religious 4=Private school, non-religious	1=Public (G8CTRL1=1) 2=Private (G8CTRL1=2-4)
10th grade school type	G10CTRL2 Follow-up school survey	1=Public school 2=Catholic school 3=NAIS private school 4=Other non-NAIS private school 5=Nontraditional schooling 6=Not enrolled in school 98=Missing	1=Public (G10CTRL2=1) 2=Private (G10CTRL2=2-5) 3=Dropped out (G10CTRL2=6) 4=Missing (G10CTRL2=98)
Family and student characteristics variables: Tables 2.3 and 2.4			
Socioeconomic status	F1SESQ Follow-up student survey	Composite variable averaging nonmissing values of five standardized components: Father's and mother's education levels and occupations, and family income. 1=Quartile 1 Low 2=Quartile 2 ... 3=Quartile 3 ... 4=Quartile 4 High 8=Missing	1=Low (F1SESQ=1) 2=Medium (F1SESQ=2 or 3) 3=High (F1SESQ=4)
Metropolitan status	G8URBAN Base year student survey	1=Urban 2=Suburban 3=Rural	None
Region	G8REGON Base year student survey	1=Northeast 2=North Central 3=South 4=West 8=Missing	None

Table A.1.—Variables used in this report—Continued

Variable description	Variable name and survey	Original coding	Recoding
Parents' religion	BYP29 Base year parent survey	1=Baptist 2=Methodist 3=Lutheran 4=Presbyterian 5=Episcopalian 6=Other Protestant 7=Catholic 8=Eastern Orthodox 9=Other Christian 10=Jewish 11=Moslem 12=Buddhist 13=Hindu 15=Other 16=None 96=Multiple response 98=Missing	1=Catholic (BYP29=7) 2=Other religion (BYP29=1–6, 8–15) 3=None (BYP29=16) 8=Missing (BYP29=96, 98)
Race/ ethnicity	RACE Base year student survey	Constructed from BYS31A 1=Asian or Pacific Islander 2=Hispanic, regardless of race 3=Black, not of Hispanic origin 4=White, not of Hispanic origin 5=American Indian or Alaskan Native 8=Missing	None
Gender	SEX Base year student survey	Constructed from BYS12 1=Male 2=Female	None

Table A.1.—Variables used in this report—Continued

Variable description	Variable name and survey	Original coding	Recoding
Age	BIRTHYR BIRTHMO Base year student survey	Constructed from BYS11 BIRTHYR 72=1972 or before 73=1973 74=1974 75=1975 or after 98=Missing BIRTHMO (1–12)	1=Under 13.5 (BIRTHYR=74 and BIRTHMO>6, or BIRTHYR=75) 2=13.5–14.5 (BIRTHYR=73 and BIRTHMO>6, or BIRTHYR=74 and BIRTHMO<7) 3=Over 14.5 (BIRTHYR<73, or BIRTHYR=73 and BIRTHMO<7)
Parental involvement variables: Table 3.1			
How often parent talks to student about school experiences	BYP66 Base year parent survey	1=Not at all 2=Rarely 3=Occasionally 4=Regularly 6=Multiple response 8=Missing	1=Rarely (BYP66=1 or 2) 2=Regularly (BYP66=3 or 4) 3=Missing (BYP66=6 or 8)
How often parent talks to student about plans for high school	BYP67 Base year parent survey	1=Not at all 2=Rarely 3=Occasionally 4=Regularly 6=Multiple response 7=Refusal 8=Missing	1=Rarely (BYP67=1 or 2) 2=Regularly (BYP67=3 or 4) 3=Missing (BYP67=6-8)
Parent belongs to PTA	BYP59A Base year parent survey	1=Yes 2=No 6=Multiple response 8=Missing	None
Parent attends school meetings	BYP59B Base year parent survey	1=Yes 2=No 6=Multiple response 8=Missing	None

Table A.1.—Variables used in this report—Continued

Variable description	Variable name and survey	Original coding	Recoding
Student characteristics variables: Table 4.1			
Academic achievement (standardized test quartile)	BYTXQURT Base year student survey	1=Quartile 1 Low 2=Quartile 2 ... 3=Quartile 3 ... 4=Quartile 4 High 8=Missing	1=Low (BYTXQURT=1) 2=Medium (BYTXQURT=2 or 3) 3=High (BYTXQURT=4) 8=Missing (BYTXQURT=8)
Student's educational expectations	BYPSEPLN Base year parent survey	1=Less than high school 2=Only graduate from high school 3=Vocational, trade, business school 4=Attend college 5=Graduate from college 6=School beyond college 98=Missing	1=High school or less (BYPSEPLN=1 or 2) 2=Attend some college (BYPSEPLN=3 or 4) 3=College or beyond (BYPSEPLN=5 or 6) 98=Missing (BYPSEPLN=98)
Parental satisfaction variables: Table 5.1			
School emphasizes discipline	BYSC47B Base year school survey	1=Not at all accurate for this school 2= ... 3= ... 4= ... 5=Very much accurate for this school 8=Missing	1=Not at all (BYSC47B=1) 2=Somewhat (BYSC47B=2 or 3) 3=A lot (BYSC47B=4 or 5) 4=Missing (BYSC47B=8)
Teacher morale is high	BYSC47G Base year school survey	1=Not at all accurate for this school 2= ... 3= ... 4= ... 5=Very much accurate for this school 8=Missing	1=Not at all (BYSC47G=1) 2=Somewhat (BYSC47G=2 or 3) 3=A lot (BYSC47G=4 or 5) 4=Missing (BYSC47G=8)
Percentage of students in a free lunch program	BYSC16A BYSC2 Base year school survey	BYSC16A (# with free lunch) BYSC2 (# enrolled)	(BYSC16A/BYSC2)*100 1=0–25% 2=26–75% 3=76–100% 4=Missing

Table A.1.—Variables used in this report—Continued

Variable description	Variable name and survey	Original coding	Recoding
School characteristics variables: Table 6.1			
School places a high priority on learning	BYP74A Base year parent survey	1=Strongly agree 2=Agree 3=Disagree 4=Strongly disagree 6=Multiple response 8=Missing	1=Yes (BYP74A=1 or 2) 2=No (BYP74A=3 or 4) 3=Missing (BYP74A=6 or 8)
The student is challenged	BYP74C Base year parent survey	1=Strongly agree 2=Agree 3=Disagree 4=Strongly disagree 6=Multiple response 8=Missing	1=Yes (BYP74C=1 or 2) 2=No (BYP74C=3 or 4) 3=Missing (BYP74C=6 or 8)
The school is safe	BYP74I Base year parent survey	1=Strongly agree 2=Agree 3=Disagree 4=Strongly disagree 6=Multiple response 8=Missing	1=Yes (BYP74I=1 or 2) 2=No (BYP74I=3 or 4) 3=Missing (BYP74I=6 or 8)

Table A.2.—Standard errors for table 2.1

Type of school	SE (percentage)	
	8th grade	10th grade
Total	NA	NA
Public school	0.62	0.73
Private school		
Catholic	0.57	0.44
Other religious	0.32	0.32
Nonreligious	0.27	0.20
Subtotal	0.62	0.60
Not enrolled	NA	0.48

NA = not applicable.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

Table A.3.—Standard errors for table 2.2

Type of 8th grade school	10th grade school SE (percentage)				
	Public	All private	Catholic	Other religious	Non-religious
Public school	0.30	0.30	0.22	0.16	0.13
Private school	2.83	2.83	2.42	2.34	1.25

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

Table A.4.—Unadjusted odds ratios, estimated logit coefficients, and standard errors

Variable	Comparison groups	B	Odds ratios	SE (B)	t-test
Public eighth-grade students					
Socioeconomic status	High vs. low	-0.8073	11.27	0.2142	-3.7697
	High vs. medium	-0.2531	2.14	0.0998	-2.5371
Metropolitan status	Urban vs. rural	-0.1827	1.73	0.1368	-1.3354
	Urban vs. suburban	0.0493	0.86	0.1153	0.4273
Region	West vs. Northeast	0.1483	0.55	0.1055	1.4050
	West vs. Midwest	-0.0111	1.05	0.1082	-0.1029
	West vs. South	0.0071	0.97	0.1040	0.0682
Parents' religion	Other vs. Catholic	0.2428	0.48	0.0981	2.4757
	Other vs. nonreligious	0.1714	0.60	0.2232	0.7678
Race/ethnicity	White vs. Black	-0.3381	2.76	0.2148	-1.5738
	White vs. Hispanic	-0.2884	2.38	0.1930	-1.4941
Gender	Male vs. female	-0.1147	1.26	0.1351	-0.8486
Age	>14.5 vs. 13.5–14.5	0.1920	0.56	0.1950	0.9848
	>14.5 vs. <13.5	0.1301	0.68	0.1797	0.7242
How often parent talks to student about school experiences	Regularly vs. rarely	-0.1487	0.74	0.1600	-0.9294
How often parent talks to student about plans for high school	Regularly vs. rarely	0.2967	1.81	0.1505	1.9711
Parent belongs to PTA	Yes vs. no	0.3756	2.12	0.1534	2.4490
Parent attends meetings	Yes vs. no	0.1540	1.36	0.1483	1.0382
Academic achievement	High vs. low	-0.2941	2.42	0.1354	-2.1722
	High vs. medium	-0.2351	2.02	0.1041	-2.2577
Student's educational expectations	College or beyond vs. high school only	-0.2622	2.20	0.1752	-1.4968
	College or beyond vs. some college	-0.3368	2.75	0.1299	-2.5931
School places a high priority on learning	No vs. yes	-0.4186	2.31	0.1901	-2.2026
The student is challenged	No vs. yes	-0.3171	1.89	0.1404	-2.2579
The school is safe	No vs. yes	0.0239	0.95	0.1902	0 1255
School emphasizes discipline	Not at all vs. a lot	0.3690	3.03	0.2456	1.5022
	Somewhat vs. a lot	0.0101	1.03	0.1636	0.0615

Table A.4.—Unadjusted odds ratios, estimated logit coefficients, and standard errors—Continued

Variable	Comparison groups	B	Odds ratios	SE (B)	t-test
Teacher morale is high	Somewhat vs. a lot	-0.0557	0.85	0.1273	-0.4375
	Not at all vs. a lot	0.4207	3.53	0.1882	2.2354
Percentage of students in a free or reduced lunch program	High vs. medium	0.0586	0.84	0.1169	0.5017
	High vs. low	0.0340	0.90	0.1735	0.1958
Private eighth-grade students					
Socioeconomic status	High vs. low	0.3275	0.37	0.1147	2.8548
	High vs. medium	0.2290	0.50	0.0696	3.2909
Metropolitan status	Urban vs. rural	0.0080	0.98	0.0915	0.0875
	Urban vs. suburban	0.2278	0.51	0.2044	1.1143
Region	West vs. Northeast	0.1349	0.58	0.0847	1.5923
	West vs. Midwest	0.3594	0.24	0.0826	4.3505
	West vs. South	0.0578	0.79	0.0948	0.6094
Parents' religion	Other vs. Catholic	0.0359	0.90	0.0841	0.4265
	Other vs. nonreligious	-0.6612	7.27	0.2872	-2.3021
Race/ethnicity	White vs. black	-0.0657	1.22	0.1249	-0.5259
	White vs. Hispanic	-0.0308	1.10	0.1105	-0.2785
Gender	Male vs. female	0.2640	0.59	0.0980	2.6951
Age	>14.5 vs. 13.5–14.5	-0.1703	1.67	0.1087	-1.5659
	>14.5 vs. <13.5	-0.1528	1.58	0.0991	-1.5425
How often parent talks to student about school experiences	Regularly vs. rarely	-0.4640	0.40	0.1196	-3.8810
How often parent talks to student about plans for high school	Regularly vs. rarely	-0.0885	0.84	0.1085	-0.8160
Parent belongs to PTA	Yes vs. no	-0.3717	0.48	0.1086	-3.4211
Parent attends meetings	Yes vs. no	-0.3801	0.47	0.1300	-2.9230
Academic achievement	High vs. low	0.0899	0.76	0.1171	0.7674
	High vs. medium	0.0597	0.84	0.0712	0.8381
Student's educational expectations	College or beyond vs. high school only	0.1633	0.61	0.1209	1.3502
	College or beyond vs. some college	0.2940	0.41	0.0742	3.9612
School places a high priority on learning	No vs. yes	-0.1458	1.34	0.2463	-0.5920

Table A.4.—Unadjusted odds ratios, estimated logit coefficients, and standard errors—Continued

Variable	Comparison groups	B	Odds ratios	SE (B)	t-test
The student is challenged	No vs. yes	-0.1303	1.30	0.1309	-0.9956
The school is safe	No vs. yes	-0.4219	2.33	0.2237	-1.8854
School emphasizes discipline	Not at all vs. a lot	-0.9733	0.05	0.3104	-3.1353
	Somewhat vs. a lot	-0.3321	0.37	0.1378	-2.4107
Teacher morale is high	Somewhat vs. a lot	-0.2074	0.54	0.2235	-0.9279
	Not at all vs. a lot	0.1159	1.42	0.0559	2.0750
Percentage of students in a free or reduced lunch program	High vs. medium	0.1222	0.69	0.1785	0.6849
	High vs. low	-0.1472	1.56	0.1636	-0.8998

e A.5.—Adjusted odds ratios, estimated coefficients, and standard errors for public school eighth-grade students

Variable	Comparison groups	SES, region, religion, and gender				Parent discusses school experiences				Parent discusses high school plans			
		B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test
Intercept		-4.0936		0.3216	-12.73	-3.9207		0.3190	-12.29	-4.0963		0.3167	-12.94
Control Variables													
Socioeconomic status	High vs. low	-0.9075	15.22	0.2535	-3.58	-0.9755	18.66	0.2635	-3.70	-0.8901	14.44	0.2550	-3.49
	High vs. medium	-0.2610	2.19	0.0992	-2.63	-0.2929	2.41	0.0950	-3.08	-0.2488	2.11	0.0979	-2.54
Region	West vs. Northeast	0.1307	0.59	0.1082	1.21	0.1289	0.60	0.1085	1.19	0.1297	0.60	0.1080	1.20
	West vs. Midwest	0.0230	0.91	0.1183	0.19	0.0221	0.92	0.1183	0.19	0.0294	0.89	0.1185	0.25
	West vs. South	0.0672	0.76	0.1151	0.58	0.0677	0.76	0.1154	0.59	0.0619	0.78	0.1167	0.53
Parents' religion	Other vs. Catholic	0.2383	0.49	0.0999	2.39	0.2389	0.49	0.0999	2.39	0.2310	0.50	0.1016	2.27
	Other vs. nonreligious	0.2603	0.46	0.2290	1.14	0.2549	0.47	0.2264	1.13	0.2635	0.45	0.2274	1.16
Gender	Male vs. female	-0.0718	1.15	0.1407	-0.51	-0.0789	1.17	0.1400	-0.56	-0.0671	1.14	0.1405	-0.48
Added Independent Variables													
Parent discusses school experiences	Regularly vs. rarely					-0.3716	0.48	0.1637	-2.27				
Parent discusses high school plan	Regularly vs. rarely									0.2659	1.70	0.1506	1.77
Parent belongs to PTA	Yes vs. no												
Parent attends meetings	Yes vs. no												
Academic achievement	High vs. low												
	High vs. medium												
Student's educational expectations	College vs. high school												
	College vs. some college												
School places priority on learning	No vs. yes												
The student is challenged	No vs. yes												
The school is safe	No vs. yes												
School emphasizes discipline	Not at all vs. a lot												
	Somewhat vs. a lot												
Teacher morale is high	Somewhat vs. a lot												
	Not at all vs. a lot												
Percentage in a free or reduced lunch program	High vs medium												
	High vs low												

e A.5.—Adjusted odds ratios, estimated coefficients, and standard errors for public school eighth-grade students—Continued

Variable	Comparison Groups	Parental involvement PTA				Parent attends school meetings				Academic achievement			
		B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test
Intercept		-4.0238		0.3220	-12.50	-4.0665		0.3220	-12.63	-4.1185		0.3420	-12.04
Control Variables													
Socioeconomic status	High vs. low	-0.8495	12.79	0.2597	-3.27	-0.8841	14.19	0.2538	-3.48	-0.8320	12.13	0.2747	-3.03
	High vs. medium	-0.2547	2.15	0.1086	-2.35	-0.2756	2.29	0.0996	-2.77	-0.2236	1.96	0.1014	-2.21
Region	West vs. Northeast	0.1287	0.60	0.1070	1.20	0.1310	0.59	0.1083	1.21	0.1316	0.59	0.1092	1.20
	West vs. Midwest	0.0270	0.90	0.1189	0.23	0.0220	0.92	0.1184	0.19	0.0246	0.91	0.1194	0.21
	West vs. South	0.0310	0.88	0.1149	0.27	0.0375	0.86	0.1177	0.32	0.0810	0.72	0.1156	0.70
Parents' religion	Other vs. Catholic	0.2046	0.54	0.0982	2.08	0.2028	0.54	0.0981	2.07	0.2474	0.48	0.0992	2.49
	Other vs. nonreligious	0.2604	0.46	0.2301	1.13	0.2524	0.47	0.2290	1.10	0.1917	0.55	0.2606	0.76
Gender	Male vs. female	-0.1094	1.24	0.1424	-0.77	-0.1075	1.24	0.1423	-0.76	-0.0801	1.17	0.1449	-0.55
Added Independent Variables													
Parent discusses school experiences	Regularly vs. rarely												
Parent discusses high school plan	Regularly vs. rarely												
Parent belongs to PTA	Yes vs. no	0.1361	1.31	0.1585	0.86								
Parent attends meetings	Yes vs. no					0.0312	1.06	0.1489	0.21				
Academic achievement	High vs. low									-0.1632	1.63	0.1617	-1.01
	High vs. medium									-0.1465	1.55	0.1090	-1.34
Student's educational expectations	College vs. high school												
	College vs. some college												
School places priority on learning	No vs. yes												
The student is challenged	No vs. yes												
The school is safe	No vs. yes												
School emphasizes discipline	Not at all vs. a lot												
	Somewhat vs. a lot												
Teacher morale is high	Somewhat vs. a lot												
	Not at all vs. a lot												
Percentage in a free or reduced lunch program	High vs. medium												
	High vs. low												

e A.5.—Adjusted odds ratios, estimated coefficients, and standard errors for public school eighth-grade students—Continued

Variable	Comparison Groups	Student's educational expectations				School places priority on learning				Student is challenged			
		B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test
Intercept		-4.1971		0.3281	-12.79	-3.7118		0.3336	-11.13	-3.9438		0.3267	-12.07
Control Variables													
Socioeconomic status	High vs. low	-0.8579	13.11	0.2692	-3.19	-0.9086	15.27	0.2547	-3.57	-0.8868	14.30	0.2548	-3.48
	High vs. medium	-0.2316	2.00	0.1015	-2.28	-0.2843	2.35	0.0993	-2.86	-0.2590	2.18	0.0995	-2.60
Region	West vs. Northeast	0.1282	0.60	0.1078	1.19	0.1318	0.59	0.1087	1.21	0.1269	0.60	0.1089	1.17
	West vs. Midwest	0.0198	0.92	0.1188	0.17	0.0240	0.91	0.1186	0.20	0.0202	0.92	0.1184	0.17
	West vs. South	0.0654	0.77	0.1149	0.57	0.0640	0.77	0.1149	0.56	0.0614	0.78	0.1147	0.54
Parents' religion	Other vs. Catholic	0.2385	0.49	0.0993	2.40	0.2508	0.47	0.0982	2.55	0.2420	0.48	0.0991	2.44
	Other vs. nonreligious	0.2560	0.46	0.2290	1.12	0.2158	0.52	0.2382	0.91	0.2275	0.51	0.2257	1.01
Gender	Male vs. female	-0.0781	1.17	0.1430	-0.55	-0.0524	1.11	0.1407	-0.37	-0.0494	1.10	0.1374	-0.36
Added Independent Variables													
Parent discusses school experiences	Regularly vs. rarely												
Parent discusses high school plan	Regularly vs. rarely												
Parent belongs to PTA	Yes vs. no												
Parent attends meetings	Yes vs. no												
Academic achievement	High vs. low												
	High vs. medium												
Student's educational expectations	College vs. high school	-0.2136	1.90	0.1482	-1.44								
	College vs. some college	-0.0136	1.04	0.1920	-0.07								
School places priority on learning	No vs. yes					-0.5229	2.85	0.1938	-2.70				
The student is challenged	No vs. yes									-0.2810	1.75	0.1467	-1.92
The school is safe	No vs. yes												
School emphasizes discipline	Not at all vs. a lot												
	Somewhat vs. a lot												
Teacher morale is high	Somewhat vs. a lot												
	Not at all vs. a lot												
Percentage in a free or reduced lunch program	High vs. medium												
	High vs. low												

Table A.5.—Adjusted odds ratios, estimated coeffiecients, and standard errors for public eight-grade students—Continued

Variable	Comparison Groups	School is safe				School emphasizes discipline				Teacher morale is high			
		B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test
Intercept		-3.9849		0.3681	-10.82	-3.8330		0.4150	-9.24	-3.7566		0.3807	-9.8683
Control Variables													
Socioeconomic status	High vs. low	-0.9060	15.15	0.2494	-3.63	-0.8425	12.52	0.2556	-3.30	-0.8225	11.79	0.2547	-3.2294
	High vs. medium	-0.2629	2.20	0.0991	-2.65	-0.2040	1.84	0.1032	-1.98	-0.1851	1.74	0.1053	-1.7581
Region	West vs. Northeast	0.1292	0.60	0.1068	1.21	0.1612	0.52	0.1135	1.42	0.1488	0.55	0.1197	1.2428
	West vs. Midwest	0.0232	0.91	0.1169	0.20	0.0121	0.95	0.1296	0.09	0.0120	0.95	0.1331	0.0920
	West vs. South	0.0645	0.77	0.1149	0.56	0.0798	0.73	0.1213	0.66	0.0907	0.70	0.1236	0.7337
Parents' religion	Other vs. Catholic	0.2393	0.49	0.0904	2.41	0.2500	0.47	0.1026	2.44	0.2643	0.45	0.1076	2.4555
	Other vs. nonreligious	0.2529	0.47	0.2300	1.10	0.2977	0.41	0.2284	1.30	0.3160	0.39	0.2317	1.3641
Gender	Male vs female	-0.0705	1.15	0.1407	-0.50	-0.0815	1.18	0.1453	-0.56	-0.1088	1.24	0.1494	-0.7281
Added Independent Variables													
Parent discusses school experiences	Regularly vs. rarely												
Parent discusses high school plan	Regularly vs. rarely												
Parent belongs to PTA	Yes vs. no												
Parent attends meetings	Yes vs. no												
Academic achievement	High vs. low												
	High vs. medium												
Student's educational expectations	College vs. high school												
	College vs. some college												
School places priority on learning	No vs. yes												
The student is challenged	No vs. yes												
The school is safe	No vs. yes	-0.1226	1.28	0.1878	-0.65								
School emphasizes discipline	Not at all vs. a lot					0.3356	2.74	0.2245	1.50				
	Somewhat vs. a lot					-0.0294	0.92	0.1576	-0.19				
Teacher morale is high	Somewhat vs. a lot									-0.0280	0.92	0.1296	-0.2157
	Not at all vs. a lot									0.4255	3.58	0.2026	2.1000
Percentage in a free or reduced lunch program	High vs. medium												
	High vs. low												

: A.5.—Adjusted odds ratios, estimated coefficients, and standard errors for public school eighth-grade students—Continued

Variable	Comparison Groups	Percentage in a free or reduced lunch program			
		B	Odds ratio	SE (B)	t-test
Intercept		-4.2031		0.3408	-12.3321
Control Variables					
Socioeconomic status	High vs. low	-0.8920	14.53	0.2504	-3.5628
	High vs. medium	-0.2288	1.99	0.1013	-2.2590
Region	West vs. Northeast	0.1718	0.50	0.1126	1.5260
	West vs. Midwest	0.0014	0.99	0.1283	0.0110
	West vs. South	0.0720	0.75	0.1219	0.5907
Parents' religion	Other vs. Catholic	0.2659	0.45	0.1027	2.5893
	Other vs. nonreligious	0.3078	0.40	0.2295	1.3414
Gender	Male vs. female	-0.0851	1.19	0.1471	-0.5783
Added Independent Variables					
Parent discusses school experiences	Regularly vs. rarely				
Parent discusses high school plan	Regularly vs. rarely				
Parent belongs to PTA	Yes vs. no				
Parent attends meetings	Yes vs. no				
Academic achievement	High vs. low				
	High vs. medium				
Student's educational expectations	College vs. high school				
	College vs. some college				
School places priority on learning	No vs. yes				
The student is challenged	No vs. yes				
The school is safe	No vs. yes				
School emphasizes discipline	Not at all vs. a lot				
	Somewhat vs. a lot				
Teacher morale is high	Somewhat vs. a lot				
	Not at all vs. a lot				
Percent with a free or reduced lunch program	High vs. medium	-0.0555	1.18	0.1227	-0.4526
	High vs. low	-0.2128	1.89	0.1554	-1.3689

e A.5.—Adjusted odds ratios, estimated coefficients, and standard errors for private school eighth-grade students—Continued

Variable	Comparison Groups	SES, region, religion, gender				Parent discusses school experiences				Parent discusses high school plans			
		B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test
Intercept		-1.0016		0.2610	-3.84	-0.7879		0.2590	-3.05	-0.9896		0.2594	-3.82
Control Variables													
Socioeconomic status	High vs low	0.3205	0.38	0.1220	2.63	0.2813	0.43	0.1201	2.34	0.3196	0.38	0.1213	2.63
	High vs. medium	0.1791	0.58	0.0771	2.32	0.1594	0.62	0.0791	2.01	0.1789	0.58	0.0774	2.31
Region	West vs. Northeast	0.1234	0.61	0.0923	1.34	0.1280	0.60	0.0910	1.41	0.1245	0.61	0.0916	1.36
	West vs. Midwest	0.3467	0.25	0.0903	3.84	0.3410	0.26	0.0900	3.79	0.3444	0.25	0.0906	3.80
	West vs. South	0.0563	0.80	0.1035	0.54	0.0663	0.77	0.1023	0.65	0.0557	0.80	0.1033	0.54
Parents' religion	Other vs. Catholic	-0.0583	1.19	0.0817	-0.71	-0.0647	1.21	0.0831	-0.78	-0.0558	1.18	0.0824	-0.68
	Other vs. nonreligious	-0.4418	3.76	0.2263	-1.95	-0.4500	3.86	0.2178	-2.07	-0.4384	3.73	0.2248	-1.95
Gender	Male vs. female	0.2734	0.58	0.1042	2.62	0.2641	0.59	0.1052	2.51	0.2740	0.58	0.1042	2.63
Added Independent Variables													
Parent discusses school experiences	Regularly vs. rarely					-0.3482	0.50	0.1222	-2.85				
Parent discusses high school plan	Regularly vs. rarely									-0.0527	0.90	0.0994	-0.53
Parent belongs to PTA	Yes vs. no												
Parent attends meetings	Yes vs. no												
Academic achievement	High vs. low												
	High vs. medium												
Student's educational expectations	College vs. high school												
	College vs. some college												
School places priority on learning	No vs. yes												
The student is challenged	No vs. yes												
The school is safe	No vs. yes												
School emphasizes discipline	Not at all vs. a lot												
	Somewhat vs. a lot												
Teacher [illegible]rale is high	Somewhat vs. a lot												
	Not at all vs. a lot												
Percentage in a free or reduced lunch program	High vs. medium												
	High vs. low												

e A.5.—Adjusted odds ratios, estimated coefficients, and standard errors for private school eighth-grade students—Continued

Variable	Comparison Groups	Parental involvement in PTA				Parent attends school meetings				Academic achievement			
		B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test
Intercept		-0.9961		0.2595	-3.84	-0.9781		0.2671	-3.66	-0.9676		0.2695	-3.59
Control Variables													
Socioeconomic status	High vs. low	0.2713	0.44	0.1320	2.06	0.3082	0.40	0.1236	2.49	0.3037	0.40	0.1248	2.43
	High vs. medium	0.1424	0.65	0.0807	1.77	0.1883	0.57	0.0770	2.45	0.1731	0.59	0.0734	2.36
Region	West vs. Northeast	0.1258	0.60	0.0902	1.40	0.1367	0.58	0.0904	1.51	0.1278	0.60	0.0932	1.37
	West vs. Midwest	0.3266	0.27	0.0888	3.68	0.3303	0.27	0.0883	3.74	0.3418	0.25	0.0909	3.76
	West vs. South	0.0629	0.78	0.1019	0.62	0.0575	0.79	0.1013	0.56	0.0561	0.80	0.1046	0.54
Parents' religion	Other vs. Catholic	-0.0457	1.15	0.0807	-0.57	-0.0480	1.15	0.0797	-0.60	-0.0647	1.21	0.0821	-0.79
	Other vs. nonreligious	-0.4480	3.83	0.2198	-2.04	-0.5500	5.21	0.2355	-2.34	-0.4492	3.85	0.2258	-1.99
Gender	Male vs. female	0.2634	0.59	0.1027	2.55	0.2621	0.59	0.1035	2.53	0.2787	0.57	0.1048	2.66
Added Independent Variables													
Parent discusses school experiences	Regularly vs. rarely												
Parent discusses high school plan	Regularly vs. rarely												
Parent belongs to PTA	Yes vs. no	-0.2993	0.55	0.1108	-2.70								
Parent attends meetings	Yes vs. no					-0.3545	0.49	0.1151	-3.08				
Academic achievement	High vs. low									0.0596	0.84	0.1082	0.55
	High vs. medium									0.0036	0.99	0.0706	0.05
Student's educational expectations	College vs. high school												
	College vs. some college												
School places priority on learning	No vs. yes												
The student is challenged	No vs. yes												
The school is safe	No vs. yes												
School emphasizes discipline	Not at all vs. a lot												
	Somewhat vs. a lot												
Teacher morale is high	Somewhat vs. a lot												
	Not at all vs. a lot												
Percentage in a free or reduced lunch program	High vs. medium												
	High vs. low												

Table A.5.—Adjusted odds ratios, estimated coefficients, and standard errors for private school eighth-grade students—Continued

Variable	Comparison Groups	Student's educational expectations				School places priority on learning				Student is challenged			
		B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test
Intercept		-0.8053		0.2846	-2.83	-0.8102		0.3316	-2.44	-0.8856		0.2771	-3.20
Control Variables													
Socioeconomic status	High vs. low	0.2792	0.43	0.1208	2.31	0.3060	0.40	0.1211	2.53	0.3038	0.40	0.1235	2.46
	High vs. medium	0.1358	0.67	0.0727	1.87	0.1663	0.61	0.0775	2.15	0.1680	0.60	0.0778	2.16
Region	West vs. Northeast	0.1270	0.60	0.0924	1.37	0.1369	0.58	0.0933	1.47	0.1316	0.59	0.0950	1.39
	West vs. Midwest	0.3453	0.25	0.0919	3.76	0.3609	0.24	0.0911	3.96	0.3575	0.24	0.0931	3.84
	West vs. South	0.0631	0.78	0.1030	0.61	0.0682	0.76	0.1050	0.65	0.0585	0.79	0.1068	0.55
Parents' religion	Other vs. Catholic	-0.0605	1.20	0.0814	-0.74	-0.0567	1.19	0.8150	-0.69	-0.0607	1.20	0.0822	-0.74
	Other vs. nonreligious	-0.4170	3.49	0.2271	-1.84	-0.4129	3.45	0.2289	-1.80	-0.4156	3.48	0.2291	-1.81
Gender	Male vs. female	0.2810	0.57	0.1024	2.74	0.2727	0.58	0.1052	2.59	0.2895	0.56	0.1062	2.73
Added Independent Variables													
Parent discusses school experiences	Regularly vs. rarely												
Parent discusses high school plan	Regularly vs. rarely												
Parent belongs to PTA	Yes vs. no												
Parent attends meetings	Yes vs. no												
Academic achievement	High vs. low												
	High vs. medium												
Student's educational expectations	College vs. high school	0.2206	0.52	0.0748	2.95								
	College vs. some college	0.0896	0.76	0.1186	0.76								
School places priority on learning	No vs. yes					-0.1870	1.45	0.2021	-0.93				
The student is challenged	No vs. yes									-0.1503	1.35	0.1141	-1.32
The school is safe	No vs. yes												
School emphasizes discipline	Not at all vs. a lot												
	Somewhat vs. a lot												
Teacher morale is high	Somewhat vs. a lot												
	Not at all vs. a lot												
Percentage in a free or reduced lunch program	High vs. medium												
	High vs. low												

le A.5.—Adjusted odds ratios, estimated coefficients, and standard errors for private school eighth-grade students—Continued

Variable	Comparison Groups	School is safe				School emphasizes discipline				Teacher morale is high			
		B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test	B	Odds ratio	SE (B)	t-test
Intercept		-0.7142		0.3509	-2.04	-2.5012		0.2841	-8.8048	-1.4267		0.3241	-4.4021
Control Variables													
Socioeconomic status	High vs. low	0.2965	0 41	0.1223	2.42	0.3037	0.40	0.1209	2.5109	0.3321	0.37	0.1282	2.5896
	High vs. medium	0.1702	0.60	0.0771	2.21	0.1732	0.59	0.0765	2.2623	0.1827	0.58	0.0784	2.3307
Region	West vs. Northeast	0.1175	0.63	0.0921	1.28	0.0950	0.68	0.0864	1.0995	0.1041	0.66	0.0862	1.2083
	West vs. Midwest	0.3422	0.25	0.0902	3.79	0.3145	0.28	0.0816	3.8569	0.3431	0.25	0.0851	4.0309
	West vs. South	0.0478	0.83	0.1041	0.46	0.0318	0.88	0.0970	0.3273	0.0324	0.88	0.0962	0.3370
Parents' religion	Other vs. Catholic	-0.0639	1.21	0.0816	-0.78	-0.0846	1.29	0.0820	-1.0317	-0.0827	1.28	0.0840	-0.9843
	Other vs. nonreligious	-0.4244	3.57	0.2325	-1.82	-0.0364	1.12	0.1917	-1.8996	-0.5454	5.14	0.2427	-2.2471
Gender	Male vs. female	0.2833	0.57	0.1050	2.70	0.2732	0.58	0.1046	2.6123	0.2666	0.59	0.1036	2.5727
Added Independent Variables													
Parent discusses school experiences	Regularly vs. rarely												
Parent discusses high school plan	Regularly vs. rarely												
Parent belongs to PTA	Yes vs. no												
Parent attends meetings	Yes vs. no												
Academic achievement	High vs. low												
	High vs. medium												
Student's educational expectations	College vs. high school												
	College vs. some college												
School places priority on learning	No vs. yes												
The student is challenged	No vs. yes												
The school is safe	No vs. yes	-0.2860	1.77	0.2282	-1.25								
School emphasizes discipline	Not at all vs. a lot					-1.3576	0.02	0.1205	-11.2662				
	Somewhat vs. a lot					-0.3107	0.39	0.1890	-1.6439				
Teacher morale is high	Somewhat vs. a lot									-0.2922	0.42	0.2040	-1.4329
	Not at all vs. a lot									-0.1372	0.66	0.0848	-1.6184
Percentage in a free or reduced lunch program	High vs. medium												
	High vs. low												

le A.5.—Adjusted odds ratios, estimated coefficients, and standard errors for private school eighth-grade students—Continued

Variable	Comparison Groups	Percentage in a free or reduced lunch program			
		B	Odds ratio	SE (B)	t-test
Intercept		-1.0240		0.3208	-3.1924
Control Variables					
Socioeconomic status	High vs. low	0.3402	0.36	0.1172	2.9030
	High vs. medium	0.1783	0.59	0.0791	2.2532
Region	West vs. Northeast	0.0948	0.68	0.0855	1.1089
	West vs. Midwest	0.2765	0.33	0.0906	3.0521
	West vs. South	0.0036	0.99	0.1026	0.0353
Parents' religion	Other vs. Catholic	-0.0893	1.31	0.0835	-1.0696
	Other vs. nonreligious	-0.5436	5.11	0.2395	-2.2695
Gender	Male vs. female	0.2842	0.57	0.1083	2.6237
Added Independent Variables					
Parent discusses school experiences	Regularly vs. rarely				
Parent discusses high school plan	Regularly vs. rarely				
Parent belongs to PTA	Yes vs. no				
Parent attends meetings	Yes vs. no				
Academic achievement	High vs. low				
	High vs. medium				
Student's educational expectations	College vs. high school				
	College vs. some college				
School places priority on learning	No vs. yes				
The student is challenged	No vs. yes				
The school is safe	No vs. yes				
School emphasizes discipline	Not at all vs. a lot				
	Somewhat vs. a lot				
Teacher morale is high	Somewhat vs. a lot				
	Not at all vs. a lot				
Percentage in a free or reduced lunch program	High vs. medium	0.2311	0.50	0.1989	1.1622
	High vs. low	0.0598	0.84	0.1769	0.3383

Table A.6.—Coding scheme for calculating odds ratios

Variable	Level of independent variable	Coding for calculating odds of making a transition, by level of independent variable	
Socioeconomic status	High	High=	Excluded
		Medium=	-1
		Low=	-1
	Medium	High=	Excluded
		Medium=	2
		Low=	-1
	Low	High=	Excluded
		Medium=	-1
		Low=	2
Metropolitan status	Urban	Urban=	Excluded
		Suburban=	-1
		Rural=	-1
	Suburban	Urban=	Excluded
		Suburban=	2
		Rural=	-1
	Rural	Urban=	Excluded
		Suburban=	-1
		Rural=	2
Region	West	West=	Excluded
		Northeast=	-1
		Midwest=	-1
		South=	-1
	Northeast	West=	Excluded
		Northeast=	3
		Midwest=	-1
		South=	-1
	Midwest	West=	Excluded
		Northeast=	-1
		Midwest=	3
		South=	-1
	South	West=	Excluded
		Northeast=	-1
		Midwest=	-1
		South	3
Parents' religion	Other religious	Other religious=	Excluded
		Catholic=	-1
		Nonreligious=	-1

Table A.6.—Coding scheme for calculating odds ratios—Continued

Variable	Level of independent variable	Coding for calculating odds of making a transition, by level of independent variable	
	Catholic	Other religious=	Excluded
		Catholic=	2
		Nonreligious=	-1
	Nonreligious	Other religious=	Excluded
		Catholic=	-1
		Nonreligious=	2
Race/Ethnicity	White	White=	Excluded
		Black=	-1
		Hispanic=	-1
	Black	White=	Excluded
		Black=	2
		Hispanic=	-1
	Hispanic	White=	Excluded
		Black=	-1
		Hispanic=	2
Gender	Male	Male=	Excluded
		Female=	-1
	Female	Male=	Excluded
		Female=	1
Age	>14.5	>14.5=	Excluded
		13.5–14.5=	-1
		<13.5=	-1
	13.5–14.5	>14.5=	Excluded
		13.5–14.5=	2
		<13.5=	-1
	<13.5	>14.5=	Excluded
		13.5–14.5=	-1
		<13.5=	2
How often parent talks to student about school experiences	Regularly	Regularly=	1
		Rarely=	Excluded
	Rarely	Regularly=	-1
		Rarely=	Excluded

Table A.6.—Coding scheme for calculating odds ratios—Continued

Variable	Level of independent variable	Coding for calculating odds of making a transition, by level of independent variable	
How often parent talks to student about plans for high school	Regularly	Regularly=	1
		Rarely=	Excluded
	Rarely	Regularly=	-1
		Rarely=	Excluded
Parent belongs to PTA	Yes	Yes=	1
		No=	Excluded
	No	Yes=	-1
		No=	Excluded
Parent attends meetings	Yes	Yes=	1
		No=	Excluded
	No	Yes=	-1
		No=	Excluded
Academic achievement	High	High=	Excluded
		Medium=	-1
		Low=	-1
	Medium	High=	Excluded
		Medium=	2
		Low=	-1
	Low	High=	Excluded
		Medium=	-1
		Low=	2
Student's educational expectations	College or beyond	College or beyond=	Excluded
		Some college=	-1
		High school only=	-1
	Some college	College or beyond=	Excluded
		Some college=	2
		High school only=	-1
	High school only	College or beyond=	Excluded
		Some college=	-1
		High school only=	2
School places a high priority on learning	No	No=	Excluded
		Yes=	-1
	Yes	No=	Excluded
		Yes=	1

Table A.6.—Coding scheme for calculating odds ratios—Continued

Variable	Level of independent variable	Coding for calculating odds of making a transition, by level of independent variable	
The student is challenged	No	No=	Excluded
		Yes=	-1
	Yes	No=	Excluded
		Yes=	1
The school is safe	No	No=	Excluded
		Yes=	-1
	Yes	No=	Excluded
		Yes=	1
School emphasizes discipline	Not at all	Not at all=	2
		Somewhat=	-1
		A lot=	Excluded
	Somewhat	Not at all=	-1
		Somewhat=	2
		A lot=	Excluded
	A lot	Not at all=	-1
		Somewhat=	-1
		A lot=	Excluded
Teacher morale is high	Not at all	Not at all=	2
		Somewhat=	-1
		A lot=	Excluded
	Somewhat	Not at all=	-1
		Somewhat=	2
		A lot=	Excluded
	A lot	Not at all=	-1
		Somewhat=	-1
		A lot=	Excluded
Percentage of students in a free lunch program	High	High=	Excluded
		Medium=	-1
		Low=	-1
	Medium	High=	Excluded
		Medium=	2
		Low=	-1
	Low	High=	Excluded
		Medium=	-1
		Low=	2

Appendix B

Sample Size Tables

Table B.1.—Sample sizes of students, by 8th and 10th grade school

Type of school	8th grade school	10th grade School
Total	17,381	17,381
Public school	14,423	14,421
Private school	2,958	2,195
Catholic	1,356	1,315
Other religious	601	585
Nonreligious	1,001	278
Not enrolled	0	765

Note: See page A-1 for a description of the data selection procedures that were used to describe the analysis used in this report.

The sample sizes were computed using weighted percentages; hence, subcatgories do not add exactly to the totals.

Source: U.S. Department of Education, National Center for Education Statisitics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-up" surveys.

Table B.2.—Sample sizes of students, by school transitions

Type of 8th grade school	10th grade school	
	Public school	Private school
Public school (percentage)	97.9	2.1
sample size	**13,394**	**287**
Private school (percentage)	35.0	65.0
sample size	**1,027**	**1,908**

Note: The sample sizes were computed using weighted percentages; hence, subcategories do not add exactly to the totals.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NESL:88), "Base Year and First Follow-up" surveys.

Table B.3.—Sample sizes of students, by various characteristics

	Public school eighth-graders	Private school eighth-graders
Total	13,681	2,935
SES		
Low	3,364	124
Medium	7,063	1,019
High	3,253	1,792
Metropolitan status		
Urban	3,458	1,323
Suburban	7,914	1,356
Rural	2,310	255
Region		
West	2,905	330
Northeast	,218	936
Midwest	3,684	761
South	4,874	908
Parents' religion		
Other religious	8,455	1,268
Catholic	3,691	1,228
Nonreligious	343	29
Race/ethnicity		
White, non-Hispanic	9,328	2,367
Black, non-Hispanic	1,444	183
Hispanic	1,780	182
Gender		
Male	6,785	1,446
Female	6,896	1,489
Age		
Over 14.5	1,492	149
13.5–14.5	8,389	1,785
Under 13.5	3,449	913
How often parent talks to student about school experiences		
Regularly	12,382	2,553
Rarely	393	21

Table B.3.—Sample sizes of students, by various characteristics—Continued

	Public school eighth-graders	Private school eighth-graders
How often parent talks to student about plans for high school		
Regularly	11,684	2,468
Rarely	1,334	142
Parent belongs to the PTA		
Yes	3,695	1,492
No	8,900	1,049
Parent attends school meetings		
Yes	4,919	1,802
No	7,671	749
Academic achievement		
Low	3,028	218
Medium	6,760	1,127
High	3,398	1,509
Student's educational expectations		
High school only	1,451	82
Attend some college	3,085	299
College or beyond	9,030	2,546
School emphasizes discipline		
Not at all	207	95
Somewhat	1,150	459
A lot	12,109	2,366
Teacher morale is high		
Not at all	267	36
Somewhat	2,967	293
A lot	10,210	2,591
Percent of students in a free or reduced lunch program	1,496	2,162
Low	8,342	576
Medium	3,579	182
High		

Source. U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988 (NELS:88), "Base Year and First Follow-Up" surveys.

☆ U.S. GOVERNMENT PRINTING OFFICE 1995 — 393-259/30313

ISBN 0-16-045644-4

United States
Department of Education
Washington, DC 20208–5651

Official Business
Penalty for Private Use, $300

Postage and Fees Paid
U.S. Department of Education
Permit No. G–17

Third Class