FAMILY INFLUENCES ON DROPOUT BEHAVIOR IN ONE CALIFORNIA HIGH SCHOOL

Russell W. Rumberger
University of California–Santa Barbara

Rita Ghatak
Personal Assistance, Research and Development

Gary Poulos
San Mateo High School

Philip L. Ritter
Stanford University

Sanford M. Dornbusch
Stanford University

Research has investigated a wide range of factors associated with dropout behavior, including family-related factors. However, most investigations of family-related factors have relied on structural measures, such as socioeconomic status, parental education, and family income. Such measures reveal little about the processes by which families influence students' achievement. This study explores in greater detail a series of variables that reveal some of the mechanisms by which families influence students' decisions to drop out of school. The results suggest that families exert an important influence on dropout behavior, just as they do on other measures of students' academic achievement. Compared to other students, even other students who have similar demographic and grade profiles, dropouts are more likely to come from families in which they have to make decisions on their own and in which their parents are less involved in their education.

The issue of high school dropouts has attracted the attention of policymakers, researchers, and educational practitioners who are trying both to understand the nature of this problem and to do something about it. One reason for such widespread concern is that demographic shifts are increasing the number of disadvantaged and minority students who historically have had the highest rates of dropping out (Levin 1986). Another reason is that some observers fear that recent reform efforts, such as more stringent requirements for graduation, may make it more difficult for some students to graduate from high school (McDill, Natriello, and Pallas 1985, 1986).

The research community has devoted considerable effort in recent years to understanding the causes of dropping out. This effort has been aided by the availability of national data, such as the High School and Beyond study, that provide in-depth information on dropouts and continuing students. It is also aided by the growing use of alternative research strategies, ranging from multivariate statistical modeling to ethnographic studies, that can increase the understanding of this complex problem (see, for example, Fine 1986; Wehlage and Rutter 1986).

Research on the causes of dropping out has focused on a wide range of related factors (Rumberger 1987). These factors can be grouped into several major categories: demographic, school related, family related, and individual. Within each category, previous studies have found a large number of specific factors that influence the decision to leave school. Among school-related factors, for example, poor attendance, disciplinary problems, and low academic achievement are all associated with higher dropout rates (see, for example, Ekstrom et al. 1986; Wehlage and Rutter 1986). Most of these factors have been identified in large, national surveys of students throughout the United States; therefore, the results may or may not apply to individual schools.

Although the research to date has been

An earlier version of this article was presented at the annual meeting of the American Educational Research Association, New Orleans, April 5–9, 1988. Support for the research was provided by the Stanford Center for the Study of Families, Children, and Youth and the Spencer Foundation New Scholar Program, administered through the School of Education, Stanford University. Address all correspondence to Dr. Russell W. Rumberger, Graduate School of Education, University of California, Santa Barbara, CA 93106.

useful in identifying the wide range of factors associated with dropping out, many of these factors are descriptive or structural and thus reveal little about the underlying processes that actually lead to dropout behavior. For example, numerous studies have shown that family background, particularly socioeconomic status (SES), exerts a considerable influence on educational attainment in general, as well as on dropout behavior. That is, students from families of a lower SES, when such status is often measured by parental education or family income, exhibit higher dropout rates than do students from families of a higher SES (see, for example Bachman, Green, and Wirtanen 1971; Ekstrom et al. 1986; Rumberger 1983).

Yet these findings reveal little of the process by which SES influences dropout behavior. Why is it that students from lower SES families have higher dropout rates? How do families influence students' academic achievement?

Research on the determinants of students' academic achievement, in which achievement is measured by test scores or grades, suggests several ways that families influence students' performance in school. First, parents in high SES families are more likely than are parents in low SES families to be involved with their children's education, as evidenced by parental participation with teachers and schools, and such involvement improves their children's academic performance (see, for example, Fehrmann, Keith, and Reimers 1987; Lareau 1987; Stevenson and Baker 1987). Second, parents improve their children's academic achievement by spending more time with their children in pursuit of activities that aid in cognitive development or the formation of human capital (see for example, Leibowitz 1977). Third, parents influence their children's academic performance by imparting the appropriate values, aspirations, and motivation needed to persevere and succeed in school (see, for example, Wright and Wright 1976). And finally, particular "parenting styles" that foster good communication between parents and their children and responsible behavior in children also appear to influence students' achievement in school (Dornbusch et al. 1987).

This research suggests a number of ways that families influence students' academic achievement. What remains unclear is whether these same factors influence a student's decision to drop out of school. Little research to date has tested these notions on dropout behavior, although the research that has been done tends to support these ideas. For instance, the presence of study aids and other literary material in the home decreases the likelihood of a student dropping out of school (Ekstrom et al. 1986; Rumberger 1983). Children from families in which family relations are "good" and in which parents more closely monitor the activities and whereabouts of their children are less likely to drop out of school than are other children (Alpert and Dunham 1986; Bachman, Green, and Wirtanen 1971). Also, children from families in which parental punitiveness is high are more likely to drop out of school than are other children (Bachman, Green, and Wirtanen 1971).

The purpose of this article is to contribute to the understanding of how families influence dropout behavior. Our study was based on a detailed set of survey and archival data on a small sample of students, both dropouts and continuing students, from a single California high school. The small sample size precluded the use of traditional multivariate techniques, so instead a matched-pair design was employed that allowed comparisons between similar types of students to see how differences among families may contribute to dropout behavior. The results suggest that families exert considerable influence on students' persistence in school.

The remainder of this article is divided into four sections. The next section describes the population under study and the variables that are analyzed. The following section provides a descriptive portrait of the dropouts from this high school that is based on a series of comparisons between dropouts and other students from the school. The third section investigates the influence of family and individual factors on dropping out that is based on matched subgroups of dropouts and other students. The final section presents a summary of the research and its implications.

DATA AND METHODS

The study reported here is part of a larger, ongoing project of schools and families being conducted in six San Francisco Bay-area high schools. Students in these high schools have been surveyed over a number of years with questionnaires designed to provide detailed information on the students' family back-

ground, school experiences, and individual attitudes and experiences. This survey information on students has been augmented with surveys of parents and teachers, as well as with information provided by the schools.

To date, the larger project has focused on the influence of families on students' achievement in school, when achievement is measured by high school grades. This study was designed to complement the larger project by examining the influence of families on students' decisions to drop out of school. It focused on dropouts from one of the high schools in the larger study whose principal—one of the authors—supplied information on the dropout status, attendance patterns, and disciplinary problems of the students in the school.

This high school is somewhat larger and has a more diverse student population than do the other high schools. The school's enrollment was 2,128 students in fall 1985, which put it in the top 13 percent of all high schools in the United States (Grant and Snyder 1986, Table 61). About 50 percent of the students were minorities—16 percent Hispanic and 13 percent Asian (see Table 3)—compared to 42 percent minority—25 percent Hispanic and 7 percent Asian—for all California schools in 1980 (Grant and Snyder 1986, Table 33). Thus, the school has a somewhat more diverse ethnic composition than do other California schools. Expenditure levels, however, are similar to state and national averages: per-pupil expenditures in the district where the high school is located were $2,766 in 1981–82 (U.S. Bureau of the Census 1985, Table 9), compared to $2,671 for all California districts and $2,726 for all school districts in the United States (Grant and Snyder 1986, Table 75).

Identifying High School Dropouts

One of the problems that confronts any study of high school dropouts is the correct identification of the dropout population (Rumberger 1987). This study relied on school records to identify dropouts. All California high schools were required to report to the state the total number of students who dropped out from grades 10–12 during the 1985–86 school year. While a number of criteria have been used at the national, state, and local levels, the California State Department of Education uses the following definition:

> . . . any student who has been enrolled in grade 10, 11, or 12 but who left school prior to graduation or the completion of a formal education, or legal equivalent, and who did not, within 45 school days, enter another public or private educational or school program, as documented by a written request for a transcript from that institution (California State Department of Education 1986, p. 33).

Individual schools are supposed to use this definition to determine the number of dropouts from grades 10, 11, and 12 every academic year. The first reporting date was October 1986 and covered the previous academic year, 1985–86.

The school reported 137 dropouts from the 1985–86 school year to the California State Department of Education on the October 1986 California Basic Educational Data System (CBEDS) form. Later that month, the school provided a list of student-identification numbers for 135 of the dropouts. We used that list of 135 students to start constructing a data base for this study.

First, we verified the dropout status of each student by consulting the school's student files. That task revealed that requests for transcripts had been received for 21 students. Thus, 16 percent of the students that the school officially reported as dropouts were actually not dropouts. A similar effort by the Auditor General of California (1987) found that a sample of 15 high schools around the state overreported the number of dropouts by an average of 39 percent. For the remaining 114 students who could be counted as dropouts, we compiled their withdrawal status on the basis of information obtained when the students left school. The majority of students were identified as dropouts because their parents withdrew them from school, and the school never received a request for a transcript (see Table 1).

Comparison Groups

A series of comparisons between dropouts and other groups of students from this high school were made. One comparison group was the population of all ninth-, tenth-, and eleventh-grade students in the 1984–85 school year, which covers the period in which the 1985 student survey was administered. Basic demographic information was obtained from the October 1985 CBEDS information sheet supplied by the school. Another com-

Table 1. Withdrawal Status of the High School Dropouts, 1985–86

Withdrawal Status[a]	Number	Subtotal Percentage	Total Percentage
1. Students Who Are Not Dropouts by State Criteria (request for a transcript received by the school)	21		15.6
2. Students Who Are Dropouts by State Criteria			
3. Withdrawal Status			
Withdrawal by parent	93	81.6	
Working	4	3.5	
Runaway	1	.9	
Juvenile hall	2	1.8	
Pregnancy	1	.9	
Over age 18—withdrawn	4	3.5	
No show	3	2.6	
Status unknown	6	5.3	
Subtotal	114	100.0	84.4
Total of 1 and 3	135		100.0

[a] The high school reported 137 dropouts on the October 1986 CBED form. Of that number, the school identified the student-identification numbers for 135 students. For those 135 students, the student personnel records were consulted to identify the reason for the student withdrawing and to determine whether a request for a transcript had been received from another school.

parison group was the sample of students who participated in the 1985 student survey. The purpose of these comparisons was to note similarities and differences between dropouts and other students in the high school.

For the purposes of the study, the dropout population of 114 was divided into two groups: those who participated in the 1985 student survey and those who did not. The former group ($N = 48$) was used to investigate the relationship between family and individual characteristics and dropout behavior. The latter group ($N = 66$) was compared with other groups of students on basic demographic and school-related variables, but not family and individual variables.

The final comparison group consisted of a selected sample of 48 continuing students who were matched on a one-to-one basis with the 48 dropouts who had participated in the student survey. The students were matched on a series of key variables that are often associated with dropping out: sex, ethnicity, grade level, family structure, and self-reported grades. Because the small sample size prevented the use of more familiar multivariate techniques, this matching provided a mechanism for controlling for some of the key differences between dropouts and continuing students to investigate the influence of other factors, such as family background, on dropout behavior. A series of paired *t*-tests based on these matched samples, along with independent *t*-tests between dropouts and all other students, was used to test a series of hypotheses about the influence of family and individual factors on dropout behavior.

Variables

A wide range of family and individual variables was examined. Several are composite measures derived from a series of questions asked of high school students and are described in some detail here. All of them have been used in other empirical studies that were based on this same set of data (see, for example, Dornbusch et al. 1987).

Family decision making. Family decision-making patterns were ascertained from students' and parents' responses to the question: Who makes most of the decisions on the following? Four domains of decisions were queried: (1) choosing his or her clothes, (2) how to spend his or her money, (3) which friends to go out with, and (4) how late he or she can stay out. The possible responses in each decision-making sphere are (1) youth alone, (2) father, (3) mother, (4) both parents, (5) father and youth, (6) mother and youth, (7) parents and youth, (8) another person or persons, and (9) nobody. Responses were collapsed into three scores: youth alone (response 1), parent alone (responses 2, 3, 4), and joint (responses 5, 6, and 7). Few answers of "another person or persons" or "nobody" were reported, so these rare responses were eliminated from the analysis.

The adolescent and one of the parents independently answered the four decision-making questions. Although these measures could be applied separately to the mother, father, or parents as a unit, in this article we treat parents as a unit. Thus, we have combined the answers of two respondents, the youth and the parent, across four decision-making spheres. Summing these eight numbers and dividing by eight gives us a mean proportion of decisions that are categorized as

youth alone (YOUTH), parent alone (PARENT), or joint (JOINT).

The sum of the three mean proportions is 1.00, since those possibilities are mutually exclusive and exhaustive. For example, a score of 0 on YOUTH indicates that neither the youth nor the parent believe that the youth is solely responsible for any of the four decisions. A score of 1.00 indicates that the youth and the parent both believe the youth is solely responsible for all the four decisions. Scores between .00 and 1.00 represent, combining the perceptions of the youth and the parent for the four decisions, the mean proportion that is perceived as the product of YOUTH. In addition, we constructed cumulative measures that identified the total proportion of decisions by the youth (YOUTHTOT = YOUTH + JOINT) and by the parents (PARTOT = PARENT + JOINT).

The reliability of our three decision-making variables was reasonably high. Cronbach's alpha was .69 for PARENT, .63 for YOUTH, and .69 for JOINT. Removal of any of the eight measures that made up each score did not improve reliability. In addition, separate alphas were computed for scores based on the parents' reports and on youths' reports, and these reliability coefficients were lower than or nearly identical to those for the combined responses.

Parenting style. Three indexes of parenting style were constructed that roughly conform with Baumrind's (1973) three styles of parenting: authoritarian, permissive, and authoritative. Twenty-five items or sets of items were identified in the student questionnaire as closely reflecting one of the three styles, and each index was constructed by taking the means of the appropriate items. No question was allowed to contribute to more than one of the indexes, so that the three scores are not forced to be correlated with each other.

The authoritarian (AUTHARN) index was based on the mean response to the following eight questions concerning the frequency of certain family behaviors: In their family communication, the parents tell the youth not to argue with adults, that the youth will know better when he or she grows up, and that the parents are correct and should not be questioned; as a response to poor grades, the parents get upset and reduce the youth's allowance or "ground" the youth; as a response to good grades, the parents tell the youth to do even better and note that other grades should be as good.

The permissive (PERMISS) index was the mean of eight responses: hard work in school is not important to the parents (the mean for four academic subjects); the parents do not care if the student gets bad grades; the parents do not care if the student gets good grades; there are no rules about watching television; and (using the highest involvement of the possible parent figures) the parents are not involved in education, they do not attend school programs for parents, they do not help with the child's homework, and they do not check the child's homework.

The authoritative (AUTHORIT) index was calculated from the mean frequency of nine responses concerning family behavior: In their family communication, parents tell the youth to look at both sides of issues, they admit that the youth sometimes knows more, they talk about politics within the family, and they emphasize that everyone should help with decisions in the family; as a response to good grades, parents praise the student and give him or her more freedom to make decisions; as a response to poor grades, they take away freedom, encourage the student to try harder, and offer to help.

The reliability of these three quantitative indexes of parenting style was assessed using Cronbach's alpha. The alpha coefficients were .70 for the eight items of the authoritarian index, .60 for the five items of the permissive index, and .66 for the nine items of the authoritative index. The alphas for the authoritarian and authoritative indexes were moderately high and satisfactory, and the alpha for the permissive index was only slightly lower.

The slightly lower reliability for the index of permissive parenting may be a product of the limited nature of the indicators of permissiveness within our questionnaire. The concept of permissiveness may be tapping two distinct and identifiable parental attitudes. Permissiveness may refer to a parenting attitude that is essentially neglectful and uncaring, or it may refer to parenting that is caring and concerned but ideologically genuinely permissive. It is impossible to disentangle these different orientations in our permissiveness scale. Ideally, researchers should construct scales and measure these two separable orientations. In the meantime, we urge caution in interpreting those portions of

our results that feature indicators of permissiveness.

Parental reactions to grades. Each student was given a list of 24 possible parental reactions to good grades and poor grades and asked in which ways his or her parents responded. The possible responses were scored 1 = "never," 2 = "sometimes," and 3 = "usually." The items were combined into scores representing the 5 parental reactions: extrinsic punishment, extrinsic rewards, encouragement, uninvolvement, and negative emotion. For each set of parents, 5 scores, one for each parental reaction, were calculated by taking the mean response to the relevant items.

The extrinsic punishment score (NEGREINF) includes six possible responses to poor grades: reducing the allowance, giving the student less freedom to make decisions, not letting the student stay out late, increasing restrictions, not permitting the student to use the car, and grounding. Reliability scores were calculated for each scale using Cronbach's alpha. Cronbach's alpha for extrinsic punishment is .86.

Extrinsic rewards for good grades (POSREINF) consisted of giving gifts, increasing the allowance, giving more freedom to make decisions, allowing the student to stay out later at night, and fewer restrictions. Cronbach's alpha for extrinsic rewards is .78.

The encouragement score (ENCOURG) included three parental responses: praise for good grades and, in response to poor grades, encouragement to try harder and offers to help. Cronbach's alpha for encouragement is .62.

The expression of negative emotions (NEGEMOT) comprised, for poor grades, making the child miserable, getting upset, and making the child feel guilty, as well as saying, in response to good grades, that other grades should be as good and that the student should do even better. Cronbach's alpha for negative emotions is .77.

The uninvolvement score (UNINVOVL) included not knowing and not caring about good grades and about poor grades. Cronbach's alpha for uninvolvement is .78.

The five parental reactions are not mutually exclusive. It is reasonable to expect that parents might have high scores on positive reinforcement and on encouragement, for example. Table 2 shows the correlations between pairs of the five parental reactions. The two negative reactions (punishment and negative emotion) are the most strongly correlated pair. The next strongest correlation is found between the two types of extrinsic reinforcement, reward and punishment.

Parent's educational involvement. Students were asked a series of questions about their parents' involvement with their education and their schools. The first variable (PARINVLC) measures the perceived extent of parental involvement with their children's high school education. The second variable (WANTINV) measures whether students would like more or less parental involvement. The third variable (PARPROG) measures how active parents are in school programs designed for them. The fourth variable (CACTPATD) measures parents' involvement with their children's school activities. A high score signifies high actual or desired involvement. The fifth variable (PHELPHW) measures how frequently the parents helped with their children's homework.

Parents were also asked the extent of their involvement with their children's education and school. Parental involvement (PTOTSCH) was a composite measure derived from positive responses to the following seven items: attended back-to-school night, attended music or drama night, attended a sporting event, discussed a disciplinary problem, discussed an educational problem, and discussed their children's class schedules. Parents who did not respond positively to any items were coded −1.

Student's educational involvement. Guttman scales were constructed from students' reports of their effort-engagement behaviors in English (ENGEEB), mathematics (MATHEEB), social studies (SSEEB), and vocational (VBEEB). The scales were based on information on the time they spent on homework for each class, on a combination of mind wandering and really paying attention in each class, and on the frequency with which they cut each class.

Because of our interest in examining the relation of each detailed measure of effort to grades, we also averaged responses for each component of the effort-engagement measures across the four subject areas, creating variables for time spent on homework (TIMEHW), paying attention in class (PAYATTND), and cutting class (CUTCLASS). Finally, the students reported how frequently their friends helped with their homework (FHELPHW).

Table 2. Descriptions of Variables

Variable	Range	Description
Family Decision Making		
YOUTH	0, 1	Proportion of decisions made by the youth alone
PARENT	0, 1	Proportion of decisions made by the parents alone
JOINT	0, 1	Proportion of decisions made jointly by the youth and the parents
YOUTHTOT	0, 1	Proportion of decisions made by the youth
PARTOT	0, 1	Proportion of decisions made by the parents
Parenting Style		
AUTHTARN	1, 5	Authoritarian parenting style
PERMISS	1, 5	Permissive parenting style
AUTHTATV	1, 5	Authoritative parenting style
Parental Reaction to Grades		
NEGREINF	1, 3	Negative external reinforcers
POSREINF	1, 3	Positive external reinforcers
ENCOURG	1, 3	Encouragement
NEGEMOT	1, 3	Negative emotions
UNIVOLV	1, 3	Parent uninvolved (1 = usually, 2 = sometimes, 3 = never)
Parents' Educational Involvement		
PARINVLC	0, 4	Student's report of parent's educational involvement (0 = not involved/4 = extremely involved)
WANTINV	0, 4	Student's desire for parent involvement (0 = would like much less/4 = would like much more)
PARPROGC	0, 4	Student's report that parents attend parental school activities
CACTPATD	0, 4	Student's report that parents attend student's school activities (0 = never/4 = always)
PHELPHW	0, 4	Student's report that parents help with homework (0 = never/4 = every day)
PTOTSCH	−1, 7	Parent's report of total contact with school (−1 = none/7 = attended all events)
Student's Educational Involvement		
ENGEEB	0, 3	English effort–engagement
MATHEEB	0, 3	Mathematics effort–engagement
SSEEB	0, 3	Social studies effort–engagement
VBEEB	0, 3	Vocational studies effort–engagement (0 = low engagement/3 = high engagement)
TIMEHW	1, 6	Mean time on homework for four classes (1 = none/6 = 4 or more hours per week)
PAYATTND	1, 5	Mean time paying attention in four classes (1 = never/5 = always)
CUTCLASS	1, 5	Mean number of class cuts for four classes (1 = never cut/5 = almost every day)
FHELPHW	0, 4	Friends help with homework (0 = never/4 = every day)
Other Variables		
TVCONTIN	0, 1	TV contingencies (0 = no, 1 = yes)
QUIETPL	0, 1	Quiet place to study (0 = no, 1 = yes)
ASPIR	1, 6	Educational aspirations
EXPECT	1, 6	Educational expectations (1 = quit school at soon as possible/6 = finish college, take further training)
WORK	0, 1	Currently working for pay outside the home (0 = no 1 = yes)
WORKHS	1, 7	Hours worked per week in the most recent week (1 = 1–4 hours/7 = 35 or more)

Other variables. A few additional variables were included in the analysis. They were information on whether there were contingencies for television viewing in the home (TVCONTIN), whether the student had a quiet place to study in the home (QUIETPL), the

level of educational aspirations (ASPIR) and expectations (EXPECT), whether the student worked for pay outside the home (WORK), and the number of hours worked (WORKHS). Brief descriptions and the range of values for all variables are shown in Table 2.

PORTRAIT OF DROPOUTS

This section compares dropouts and other students in the high school along a number of demographic and school-related variables to see to what extent the two groups differ. When possible, we note whether any observed differences are consistent with national studies of dropouts. Of course, inconsistencies between national data and this local data set could be attributable to differences in how the dropout populations are defined, as well as in the characteristics of dropouts. For example, one of the major sources of data for recent studies of dropouts is the 1980 sophomore cohort from the High School and Beyond survey, which consists of students who were enrolled in high school in the spring of their sophomore year and who were not enrolled and not high school graduates two years later. That sample of dropouts does not cover students who drop out before the spring of their sophomore year or after the spring of their senior year, so it may not be completely representative of all students who drop out of school, nationally or locally.

Within this local high school, comparisons between dropouts and other students along some basic demographic dimensions reveal both similarities and differences (see Table 3). Dropouts show the same distribution of grade levels as do other groups of students, which suggests that students drop out of each grade in roughly the same proportion as their enrollment. Gender distributions are also similar between dropouts and other students.

There are, however, ethnic differences between dropouts and other students. Dropouts are more likely to be Hispanic, black, and Anglo and less likely to be Asian or from other ethnic groups. Overall, however, these differences are not statistically significant on the basis of a chi-square test. This finding

Table 3. Grade Level, Sex, Ethnicity, and Family Structure, by Group Status (Percentage Distributions)[a]

	Grades 9–11			Dropouts		Matched
	CBED (N = 1,778)	Survey (N = 1,287)	Total (N = 114)	Without Data (N = 66)	With Data (N = 48)	Students (N = 48)
	1	2	3	4	5	6
Grade Level (1985–86)						
10	32.3	38.3	28.9	33.3	22.9	31.3
11	34.1	33.6	37.7	34.8	41.7	39.6
12	33.6	28.1	33.3	31.8	35.4	29.2
Sex						
Male	51.1	51.1	48.2	51.1	43.8	43.8
Female	48.9	48.9	51.8	48.5	56.3	56.3
Ethnicity						
Asian	13.0	14.8	8.8	9.2	8.3	8.3
Black	10.1	8.1	11.5	13.8	8.3	8.3
Other	12.3	14.1	9.7	12.3	6.3	6.3
Hispanic	16.1	16.6	21.2	10.8	35.4	35.4
Anglo	47.2	46.4	48.7	53.8	41.7	41.7
Family Structure						
Two parents	—	60.4	—	—	59.5	68.1
Single mother	—	16.7	—	—	21.4	23.4
Mother/ stepfather	—	11.9	—	—	7.1	8.5
Single father	—	3.1	—	—	2.4	0.0
Father/stepmother	—	4.6	—	—	2.4	0.0
Other	—	3.4	—	—	7.1	0.0

[a] Chi-square tests show no significant differences between groups. The sources of the data were as follows: Column 1—CBED, October 1985; Column 2—participants in the study, spring 1985; Column 3—dropouts, 1985–86; Column 4—dropouts who did not participate in the study; Column 5—dropouts who participated in the study; and Column 6—continuing students from the study matched with dropouts in Column 5 on the basis of sex, ethnicity, self-reported grades, and family structure.

contrasts with national data that show dropout rates are much higher for blacks and Hispanics than for Anglos (see, for example, Pallas 1986, p. 6). Yet other school systems have also reported that the ethnic profile of dropouts is similar to the ethnic profile of all students (see Schwartz and Hargroves 1986–87, Table 2). One possible reason for this discrepancy is that our data show only nominally higher dropout rates of blacks and Hispanics over one academic year, yet these differential rates, compounded over several years, would lead to substantially higher overall dropout rates for these groups.

Dropouts also come from similar kinds of families as do other students in this high school. This finding, too, contrasts with studies based on national data in which dropout rates are lower for students from two-parent households than from other households (see, for example, Ekstrom et al. 1986, Table 7).

In terms of grades, however, dropouts are clearly different from other students. On the basis of self-reported grades from the 1985 student survey, dropouts are much more likely to report average grades of "D" or lower and much less likely to report "A" and "B" grades than are other students (see Table 4). An examination of the students' transcripts revealed that the cumulative grade-point average for dropouts was actually even lower than the self-reported grades from the previous year. In addition, the grade-point averages of the two dropout groups were different, with the 48 students used in the detailed analysis having statistically higher grades than the other group of dropouts. The students who were matched to the 48 dropouts had somewhat higher grades, but, overall, these differences in grades were not statistically significant.

Another area of comparison was attendance and behavioral problems, data for which were obtained from the attendance and truancy files maintained by the school. The data were divided into two groups, one consisting of various attendance and behavioral problems and the other consisting of disciplinary actions taken to correct these various behaviors. In each group, the behaviors and actions were divided into four categories representing increasing levels of "severity." The least severe category consisted of tardiness; the second category, cutting class; the third category, mild disciplinary problems, such as truancy and talking back in class; and the fourth category, severe disciplinary problems, such as assault, theft, or incidents with the police.

Comparisons between the two dropout groups and the matched group of students revealed that

Table 4. Self-reported Grades and Cumulative Grade-point Average, by Group Status (Percentage Distributions)[a]

	All Students, Grades 9–11 in Survey (N = 1,287)	Dropouts			Matched Students (N = 48)
		Total (N = 114)	Without Data (N = 66)	With Data (N = 48)	
	1	2	3	4	5
Self-reported Grades, Spring 1985[b]					
Below D	2.1	—	—	8.3	2.1
Ds	17.2	—	—	38.9	25.0
Cs	39.1	—	—	36.8	60.4
Bs	31.8	—	—	11.1	10.4
As	9.8	—	—	5.6	2.1
Cumulative Grade-point Average, Spring 1986[c]					
Below D	—	44.2	58.5	25.0	0.0
Ds	—	32.7	24.6	43.8	31.3
Cs	—	16.8	13.8	20.8	60.4
Bs	—	6.2	3.1	10.4	8.4
As	—	0.0	0.0	0.0	0.0

[a] The sources of data were as follows: Column 1—participants in the study, spring 1985; Column 2—dropouts, 1985–86; Column 3—dropouts who did not participate in the study; Column 4—dropouts who participated in the study; Column 5—continuing students from the study matched with dropouts in Column 4 on the basis of sex, ethnicity, self-reported grades, and family structure.

[b] Chi-square tests between groups 2 and 5 significant at the .001 level.

[c] Chi-square tests between groups 4 and 5 significant at the .001 level.

the dropouts, on average, had more behavioral and attendance problems, especially of the severest kind, than did similar students who did not drop out (see Table 5). This result is consistent with national studies that have found disciplinary problems in school to be associated with higher dropout rates (Ekstrom et al. 1986, Table 7).

In summary, these comparisons reveal that dropouts at this high school are not very different from other students in terms of grade level, gender, ethnicity, or the type of families they come from. They are quite different, however, in terms of grades, attendance patterns, and disciplinary problems: dropouts, in general, have lower grades, poorer attendance records, and more and severer disciplinary problems than do other students.

INFLUENCES ON DROPOUT BEHAVIOR

The second part of this study was designed to examine the influence of family-related and individual factors on dropout behavior. This analysis utilized data from the 1985 surveys of students and parents that provided detailed information on the students' families and on the students' attitudes and activities. Because of the small sample of dropouts who participated in the 1985 student survey ($N=48$), the analysis was carried out through a series of bivariate comparisons between the dropout group and three other groups: (1) all students who participated in the 1985 survey (N = 1,287), (2) all students who participated in the 1985 survey and reported a grade-point average of 2.0 or less (N = 392), and (3) the matched group of students (N = 48). Mean values for each independent variable were computed for each group.

Tests of statistical significance between dropouts and the first two groups are based on independent t-tests of differences in group means. Tests of statistical significance between dropouts and the third group are based on paired t-tests of mean differences between matched individuals. To the extent that the variables used to match students are related to the independent variable, then the latter technique provides a more powerful test of the unique influence of the independent variable on dropping out.

A wide range of family and individual variables was examined in this analysis. They included family-process variables that cover communication patterns, discipline, and parenting styles; school-related variables that cover the students' and families' attitudes and behaviors related to school; and student

Table 5. Attendance and Disciplinary Action, by Group Status (Mean Number of Incidents)[a]

	Dropouts		
	Without Data (N = 66) 1	With Data (N = 48) 2	Matched Students (N =48) 3
Attendance and Behavioral Problems			
1. Tardiness	9.38	10.04	7.85
2. Class cuts (unexcused absences)	9.46	13.81	3.15
3. Mild disciplinary problems, such as truancy, talking back to the teacher, insubordination in class	1.30	1.74	1.27
4. Severe disciplinary problems, (including assault, theft, and incidents involving the police)	.93	1.66	.21
Disciplinary Action Taken for			
1. Tardiness	1.29	1.25	.94
2. Class cuts (referral to the administration for five absences from one class in one semester, for example)	1.27	1.97	.48
3. Mild disciplinary problems (referral to Temporary Alternative Placement, for instance)	2.39	3.40	1.65
4. Severe disciplinary problems (such as referral to Youth Services Bureau)	2.68	3.83	.46

[a] The data were obtained from the attendance and truancy files. Data on attendance cover grades 8–12. The sources of data were as follows: Column 1—dropouts who did not participate in the study; Column 2—dropouts who participated in the study; Column 3—continuing students from the study matched with dropouts in Column 2 on the basis of sex, ethnicity, self-reported grades, and family structure.

variables that cover a range of attitudes and activities.

Comparisons between dropouts and all students revealed some important differences in the family-process variables (see Table 6). Compared to all students (Column 1a), dropouts (Column 1b) report a significantly lower proportion of decisions made jointly (JOINT) with their parents and a higher proportion of decisions made individually (YOUTH), which leads to lower reported levels of parental involvement in all decision making (PARTOT). Even compared to students with low grades (Column 2a), dropouts (Column 2b) still report significantly higher proportions of decisions made on their own and a lower proportion of decisions made by their parents. These same patterns also appear in the matched-group comparisons (Column 3a and Column 3b), but, probably because of the small sample size, they are not statistically significant.

The only consistent difference in parenting styles between dropouts and the three comparison groups concerns the permissive (PERMISS) parenting index: Dropouts are more likely than are all other groups of students to live in households characterized by a permissive parenting style. And although this difference is significant only in the first comparison group, there are significant differences between these later two groups in some of the individual variables that make up the composite, as will be shown later.

This finding is consistent with previous research with the same data. The earlier study found that both authoritarian and permissive parenting styles had a negative impact on students' grades (Dornbusch et al. 1987), while this study found that only the permissive parenting style had a negative effect on dropout behavior. Previous research has also shown that more parental monitoring of students' activities helps reduce dropout rates (Alpert and Dunham 1986), which is consistent with the findings reported here.

Furthermore, dropouts differ from other students, at least other low-achieving students, in terms of how their parents react to their good and bad grades. The parents of dropouts are more likely to use extrinsic punishments (NEGREINF), such as not allowing the students to use the car, as a reaction to poor grades than are the parents of other low-achieving students (see Table 6, Column 2a) and are more likely to react with negative emotions (NEGEMOT) to either good or bad grades. The parents of the students who are closely matched to the dropout group (Table 6, Column 3a) also are less likely than are the parents of dropouts to use extrinsic punishments and negative emotions in reaction to their children's grades, even though this group, too, is performing poorly in school. This result is consistent with an earlier study which found that high levels of parental punitiveness were associated with higher dropout rates (Bachman, Green, and Wirtanen 1971, Figure 3–4), although the reason for parental punitiveness was not linked to grades.

Dropouts differ most from other students along several dimensions that reflect their own and their parent's educational involvement. In general, dropouts report that their parents are less involved in their education than do other students, although not all these differences are statistically significant. One difference that is significant concerns how much involvement students desire: Matched students (Table 6, Column 3a) report they would like more parental involvement (PARINVLC) than dropouts (Column 3b) or even all other students (Column 1a). Matched students also report that their parents help them with their homework (PHELPHW) more than do dropouts or students in general. The most consistent finding among all three comparison groups, however, concerns the parents' reports of their total involvement in school: The parents of dropouts are much less involved in their children's school activities than are the parents of other students, even other low-achieving students.

This latter finding is consistent with other studies that found that the parents' deep involvement with school had a positive effect on students' grades (Fehrmann, Keith, and Reimers 1987; Stevenson and Baker 1987). In addition, it is supported by a recent ethnographic study of Chicano students—some who dropped out and some who did not—that found differences in the amount of parental support and involvement between dropouts and those who stayed in:

> Parents of students who stayed in school had usually dropped out of school, but they strongly believed that their children should get an education beyond high school. Throughout their [child's] schooling career this was demonstrated in many ways by verbal encouragement, attendance at school activities, regular meetings with the school personnel, and every other

Table 6. Mean Values of Family and Student Variables, by Group[a]

Variable	Comparison Groups[b]					
	1a	1b	2a	2b	3a	3b
Family Decision Making						
YOUTH	.60	.71**	.64	.71*	.65	.72
PARENT	.11	.08	.11	.08	.10	.08
JOINT	.30	.21**	.25	.21	.24	.20
YOUTHTOT	.90	.92	.89	.92	.90	.92
PARTOT	.40	.29**	.36	.29*	.35	.28
Parenting Style						
AUTHTARN	3.53	3.57	3.66	3.57	3.57	3.52
PERMISS	2.95	3.12†	3.06	3.12	2.95	3.13
AUTHTATV	3.48	3.48	3.41	3.48	3.52	3.42
Parental Reaction to Grades						
NEGREINF	2.39	2.46	2.18	2.46**	2.37	2.44
POSREINF	2.36	2.28	2.35	2.29	2.44	2.27
ENCOURG	1.60	1.64	1.69	1.64	1.56	1.66
NEGEMOT	1.94	2.03	1.71	2.03*	1.90	2.05
UNIVOLV	2.77	2.65	2.68	2.65	2.79	2.58
Parents' Educational Involvement						
PARINVLC	2.06	1.78	1.95	1.78	2.15	1.73
WANTINV	1.97	1.86	1.93	1.86	2.28	1.74**
PARPROGC	.86	.70	.61	.70	.88	.69
CACTPATD	1.14	.81†	.82	.81	.83	.88
PTOTSCH	.69	.20**	.55	.20**	.63	.21*
PHELPHW	.93	.84	.85	.84	1.26	.76†
Student's Educational Involvement						
ENGEEB	2.35	2.06*	2.13	2.06	2.29	2.13
MATHEEB	2.35	2.03*	1.99	2.03	2.61	2.06†
SSEEB	2.27	2.08	2.04	2.08	2.19	2.06
VBEEB	2.57	2.41	2.52	2.41	2.60	2.36
TIMEHW	3.51	3.18†	3.06	3.18	3.59	3.14†
PAYATTND	3.99	3.72*	3.72	3.72	4.02	3.70†
CUTCLASS	1.49	2.09†	1.88	2.09	1.42	2.11**
FHELPHW	3.21	3.45	3.59	3.45	2.81	3.44*
Other Variables						
TVCONTIN	.79	.82	.84	.82	.66	.77
QUIETPL	.87	.78	.84	.78	.98	.77**
ASPIR	4.25	3.40**	3.45	3.40	3.70	3.40
EXPECT	4.09	3.11**	3.28	3.11	3.46	3.09
WORK	.53	.48	.51	.48	.57	.53
WORKHRS	2.98	3.57*	3.37	3.57	3.24	3.35

† Difference between comparison groups significant at the .10 level.

* Difference between comparison groups significant at the .05 level.

** Difference between comparison groups significant at the .01 level.

[a] The sample size shows the number of cases in each comparison group. The actual number of cases used in each comparison will vary, depending on the number of cases with nonmissing values for each variable. In addition, although comparison groups 1b, 2b, and 3b are the same, the mean values shown for comparison group 3b may differ with the mean values shown for the other two groups because of the pair-wise deletion of missing values in the former case.

[b] Comparison groups were as follows: Column 1a—all students who participated in the spring 1985 survey (N = 1,287); Column 1b—dropouts from 1985–86 who participated in the survey (N = 48); Column 2a—survey students with self-reported grade-point averages less than 2.0 (N = 392); Column 2b—dropouts from 1985–86 who participated in the survey (N = 48); Column 3a—survey students matched with dropouts on the basis of gender, ethnicity, self-reported grades, and family structure (N = 48); and Column 3b—dropouts from 1985–86 who participated in the survey (N = 48).

> measure necessary to keep the students in school. (Delgado-Gaitan 1988, p. 371)

Another recent ethnographic study noted differences between the educational involvement of higher SES parents and lower SES parents, although this involvement was not directly tied to educational achievement (Lareau 1987).

Dropouts also are less involved in their education than are other students. Compared to all other students and even matched students who are more like them, dropouts exert less effort in some of their academic subjects (ENGEEB, MATHEEB), spend less time on homework (TIMEHW), pay less attention in class (PAYATTND), and cut class more often (CUTCLASS). Furthermore, compared to students in general, dropouts reported lower educational aspirations and expectations. Such differences have been found as well in national surveys that compared dropouts and students who remain in school (Ekstrom et al. 1986).

There are two additional significant differences between dropouts and the matched comparison group. First, dropouts are more likely to report that their friends help them with their homework (FHELPHW) than are all other students, but especially more than the matched students. Recall that the matched students are more likely to report that their parents help them with their homework (PHELPHW) than are dropouts. Second, dropouts are less likely to report that they have a quiet place to study (QUIETPL) than are other students, but especially matched students.

The strongest pattern that emerges from this analysis is the lower level of educational involvement exhibited by dropouts and their parents compared to other students. This finding is strengthened in comparisons between dropouts and the sample of students whose demographic characteristics and school performance most closely match those of dropouts. What most distinguishes dropouts from other low-achieving students who stay in school is the higher levels of educational involvement by both the parents and the children of those who stay in school.

DISCUSSION AND CONCLUSIONS

The study analyzed some of the better-known demographic and academic characteristics of dropouts and some of the lesser-known family characteristics of dropouts, particularly family *processes,* in one California high school for the 1985–86 academic year. Unlike national profiles, dropouts in this school are not disproportionately ethnic minorities or from single-parent households. They are similar to national samples in having lower grades, poorer attendance, and more disciplinary problems than do other students.

The analysis of family influences identified three major differences between the families of dropouts and the families of other students. First, there were differences in *parenting styles*. Dropouts were more likely to come from families with a permissive parenting style and, as a consequence, were more likely to make decisions about proper behavior and activities on their own. Second, there were differences in *parental reactions to students' grades*. Parents of dropouts were more likely to use negative sanctions and emotions in reaction to their children's academic performance, while parents of other students were more likely to use positive emotional reactions. Third, there were differences in the *parents' academic involvement*. The parents of dropouts reported they were less engaged with their children's schooling. Dropouts themselves reported that they made less of an effort and were less engaged in their academic subjects; thus, they spent less time doing homework, paid less attention in class, and cut classes more frequently. These actions contributed to their poor performance in school and eventually to their dropping out.

This analysis revealed three important differences between the families of dropouts and those of other students. Together with previous studies on dropouts and school performance, the findings also suggest some possible explanations of *how* families influence dropout behavior and *why* differences in family practices arise.

First, recent research has suggested that a permissive parenting style can lead to excessive autonomy (Steinberg, Elman, and Mounts 1989). As a result, adolescents make decisions without their parents' guidance and become more susceptible to the influence of their peers (Steinberg and Silverberg 1986). The lack of parental control and excessive peer influence may lead to improper social attitudes and behaviors, as well as to a host of negative outcomes, ranging from truancy to drug use, from depression to low grades

(Dornbusch et al. 1985; Dornbusch et al. 1987; Steinberg et al. 1988). It can also lead to poor attendance and disciplinary problems in school, which influence dropout behavior (see, for example, Wehlage and Rutter 1986).

In contrast, an authoritative parenting style, by encouraging the youth's active participation in the discussion of choices, facilitates the development of psychosocial maturity. The task in parenting the adolescent is to enhance psychological independence without incurring the high cost of behavioral autonomy and to retain a close relationship without constraining the development of the youth's individuality. Joint decision making assists the youth to make sense of the cosmos—to make behavioral choices while considering the consequences from the parent's world view. It may also enhance the development of cognitive skills, which would improve the youth's academic performance (Hill 1980).

What accounts for differences in parenting styles? Maccoby and Martin (1983) suggested that there are two types of permissive parents, each with different motivations. One type of permissive parent is neglectful, putting personal interests before the well-being of the adolescent. Another type of permissive parent is ideologically motivated, believing that inaction is in the best interests of the adolescent—that disengagement is not only appropriate but necessary for the normal development of the adolescent. To the second type, the lessening of involvement represents an acknowledgment of forthcoming adulthood. These ideologically motivated parents may respond warmly to the adolescent's bid for psychological autonomy, but they do so by abdicating behavioral control.

Another possible motivator of parental permissiveness is the avoidance of conflict. By granting the behavioral autonomy that the adolescent seems to be asking for, permissive parents avoid arguments (Steinberg, Elman, and Mounts 1989). There may also be an element of "emotional blackmail" in permissive parenting, motivated by the parent's fear of losing the adolescent's love. Single parents who have been observed to be higher in permissive parenting, may adopt this form of parenting to compensate for their absence while at work and for their inability to provide certain material advantages.

Second, a parent's reaction to a student's grades can help or hinder the student's internal motivation. Research has shown that extrinsic rewards and punishments reduce internal motivation, since individuals then explain their behavior as the product of outside forces (Lepper and Greene 1978). In contrast, parents who offer encouragement, praise, and other positive responses leave their children ultimately responsible for their own behavior, which helps the children develop internal motivation and improves their academic performance (Dornbusch et al. undated). This process may also operate on dropout behavior, since this study and others have found that dropouts demonstrate lower levels of internal control and have lower educational aspirations than do other students (see, for example, Eckstrom et al. 1986; Rumberger 1983).

Parents' support for their children may be especially important in the face of poor school performance. Seginer (1983) found that middle-class parents continue to encourage their children to have high educational expectations even when the children receive low grades. Lower-class parents, however, are more likely to be discouraged and discouraging when their children's grades are poor. One reason is that lower-class parents are more likely to accept the authority of the school and the feedback about their children as accurate, even when it is negative (Lareau 1987). Such responsiveness to negative school evaluations can reduce a student's desire to remain in school.

Third, parents' involvement in their children's education influences dropout behavior. In addition to acceptable social behavior and internal motivation, some students need academic assistance to succeed and remain engaged in school. Such assistance can come, in part, from schools and from peers, but mounting evidence suggests that parental involvement is important. Parental involvement includes parents' monitoring and helping students' with homework, attending school conferences and functions, and providing a supportive learning environment at home. Because they frequently do poorly in school, dropouts probably need more assistance than do other students, yet they report lower levels of parental involvement.

As in the case of parenting styles, differences in academic involvement could arise simply because of the parents' neglect. Parents of dropouts may be too preoccupied with family or personal matters to provide the support their children need. Often parents of

dropouts are viewed as negligent because they choose not to become involved in their children's education. But lower-class parents and new immigrants may simply lack the knowledge to do so (Delgado-Gaitan 1988; Lareau 1987; Yao 1988).

This analysis also suggests how dropping out can be viewed as a dynamic process of slow, cumulative disengagement from school, as other studies have noted (Rumberger 1987; Wehlage and Rutter 1986). Each of the family influences identified in this study affects academic achievement. Poor academic achievement, in turn, predicts dropping out of school (Eckstrom et al. 1986).

But academic performance is also influenced by peers and particularly by schools. A supportive and encouraging environment at school can go far to compensate for a lack of parental support and assistance, yet many at-risk students attend large urban schools in which the environment is a negative influence (see, for example, Fine 1986; Hess et al. 1986).

This discussion leads to two important conclusions about strategies to combat the dropout problem. First, three areas need to be addressed: social support, academic encouragement, and academic assistance. Second, strategies to combat dropping out can attempt either to strengthen and improve parental influences in these three areas or to provide comparable influences from schools, social agencies, or the community.

For example, reviews of dropout prevention and recovery programs have found that effective programs provide not only good academic assistance, but social support and encouragement (Orr 1987; Rumberger in press). Even strategies that focus solely on social support and decision-making skills appear to improve the academic performance of at-risk students (Larson 1989). These types of strategies are generally designed to provide support and assistance to students in the absence of suitable support and assistance from their families.

Other strategies to assist at-risk students attempt to strengthen parental involvement so that both schools and families can provide the support and assistance students need to succeed in school (see, for example, Comer 1986). It is not true that parents are unable or unwilling to change their parenting of adolescents (Steinberg, Elman, and Mounts 1989); they can and do change their approaches and expectations (Collins 1987).

But all too often, workshops and parent meetings reach the wrong audience. Preaching to the converted is easy: Parents who attend are most likely already to be concerned and practicing appropriate techniques. Schools must design strategies to target the parents of students who are most at risk—single parents, stepparents, and immigrant parents. The parenting techniques to be emphasized have the dual benefit of improving the students' performance in school, as well as reducing the risk of their dropping out.

REFERENCES

Alpert, G., and R. Dunham. 1986. "Keeping Academically Marginal Youths in School." *Youth & Society* 17:346–361.

Auditor General of California. 1987. *California's Data on High School Dropouts Are Inaccurate*. Sacramento, CA: Office of the Auditor General.

Bachman, J. G., S. Green, and I. D. Wirtanen. 1971. *Dropping Out: Problem or Symptom?* Ann Arbor: Institute for Social Research, University of Michigan.

Baumrind, D. 1973. "The Development of Instrumental Competence Through Socialization." Pp. 3–46 in *Minnesota Symposium on Child Psychology*, Vol. 7, edited by A. D. Pick. Minneapolis: University of Minnesota Press.

California State Department of Education. 1986. *California Dropouts: A Status Report*. Sacramento.

Collins, W. 1987. "Parent-Child Relationships in the Transition to Adolescence: Interpersonal Adaptations to Individual Change." Paper presented at the biennial meetings of the Society for Research in Child Development, Baltimore.

Comer, J. P. 1986. "Parent Participation in the Schools." *Phi Delta Kappan* 67:442–444.

Delgado-Gaitan, C. 1988. "The Value of Conformity: Learning to Stay in School. *Anthropology and Education Quarterly* 19:354–381.

Dornbusch, S. M., J. M. Carlsmith, S. Bushwall, P. L. Ritter, P. H. Leiderman, A. H. Hasturf, and R. T. Gross. 1985. "Single Parents, Extended Households, and the Control of Adolescents." *Child Development* 56:326–341.

Dornbusch, S. M., J. T. Elworth, and P. L. Ritter. Undated. "Parental Reaction to Grades: A Field Test of the Over-Justification Approach." Unpublished manuscript.

Dornbusch, S. M., P. L. Ritter, P. H. Leiderman, D. F. Roberts, and M. J. Fraleigh. 1987. "The Relation of Parenting Style to Adolescent School Performance." *Child Development* 58:1244–1257.

Ekstrom, R. B., M. E. Goertz, J. M. Pollack, and D. A. Rock. 1986. "Who Drops Out of High School and Why? Findings From a National Study." *Teachers College Record* 87:356–373.

Fine, M. 1986. "Why Urban Adolescents Drop Into and Out of Public High School." *Teachers College Record* 87:393–409.

Fehrmann, P. G., T. Z. Keith, and T. M. Reimers. 1987. "Home Influence on School Learning: Direct and Indirect Effects of Parental Involvement on High School Grades. *Journal of Educational Research* 80:330–337.

Grant, W. V., and T. D. Snyder. 1986. *Digest of Education Statistics, 1985–86.*Washington, DC: Office of Educational Research & Improvement, U.S. Department of Education.

Hess, Jr., G. A., E. Wells, C. Prindle, P. Liffman, and B. Kaplan. 1986. *Where's Room 185? How Schools Can Reduce Their Dropout Problem.* Chicago: Chicago Panel on Public School Policy & Finance.

Hill, J. P. 1980. "The Family." Pp. 32–55 in *Toward Adolescence: The Middle School Years* (Seventy-ninth Yearbook of the National Society for the Study of Education), edited by M. Johnson. Chicago: University of Chicago Press.

Lareau, A. 1987. "Social-Class Differences in Family-School Relationships: The Importance of Cultural Capital." *Sociology of Education* 60: 73–85.

Larson, K. A. 1989. "Task-Related and Interpersonal Problem-solving Training for Increasing School Success in High Risk Young Adolescents." *Remedial and Special Education* 10: 32–42.

Leibowitz, A. 1977. "Parental Inputs and Children's Achievement." *Journal of Human Resources* 12:242–251.

Lepper, M. R., and D. Greene. 1978. *The Hidden Cost of Reward: New Perspectives on the Psychology of Motivation.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Levin, H. M. 1986. *Education Reform for Disadvantaged Students: An Emerging Crisis.* Washington, DC: National Education Association.

Maccoby, E. E., and J. A. Martin. 1983. "Socialization in the Context of the Family: Parent-Child Interactions." Pp. 1–101 in *Handbook of Child Psychology,* Vol. 4, *Socialization, Personality, and Social Development,* edited by E. M. Hetherington. New York: John Wiley & Sons.

McDill, E. L., G. Natriello, and A. M. Pallas. 1985. "Raising Standards and Retaining Students: The Impact of the Reform Recommendations on Potential Dropouts." *Review of Educational Research* 55:415–433.

———. 1986. "A Population at Risk: Potential Consequences of Tougher School Standards for Student Dropouts." *American Journal of Education* 94:135–181.

Orr, M. Terry. 1987. *Keeping Students in School.* San Francisco, CA: Jossey-Bass.

Pallas, A. M. 1986. "School Dropouts in the United States." *Issue Paper.* Washington, DC: U.S. Department of Education, Center for Education Statistics.

Rumberger, R. W. 1983. "Dropping Out of High School: The Influence of Race, Sex, and Family Background." *American Educational Research Journal* 20:199–220.

———. 1987. "High School Dropouts: A Review of Issues and Evidence." *Review of Educational Research* 57:101–121.

———. In press. "Second Chance for High School Dropouts: Dropout Recovery Programs in the United States." In *Second Chance in Education: An Interdisciplinary and International Perspective,* edited by D. Inbar. Philadelphia: Falmer.

Schwartz, R., and J. Hargroves. 1986–87. "The Boston Compact." *Metropolitan Education* 3: 14–24.

Seginer, R. 1983. "Parents' Educational Expectations and Children's Academic Achievements: A Literature Review." *Merrill-Palmer Quarterly* 29:1–23.

Steinberg, L., B. B. Brown, M. Cider, N. Cazmarek, and C. Lazzaro. 1988. "Noninstructional Influences on High School Student Achievement: The Contributions of Parents, Peers, Extra-curricular Activities and Part-time Work." Madison, WI: National Center on Effective Secondary Schools.

Steinberg, L., J. D. Elman, and N. S. Mounts. 1989. "Authoritative Parenting, Psychosocial Maturity and Academic Success Among Adolescents." *Child Development* 60:1424–1436.

Steinberg, L., and S. B. Silverberg. 1986. "The Vicissitudes of Autonomy in Early Adolescence." *Child Development* 57:841–851.

Stevenson, D. L., and D. P. Baker. 1987. "The Family-School Relation and the Child's School Performance." *Child Development* 58:1348–1357.

U.S. Bureau of the Census. 1985. *U.S. Census of Governments,* Vol. 4: *Government Finances,* No. 1, *Finances of Public School Systems.* Washington, DC: U.S. Government Printing Office.

Wehlage, G. G., and R. A. Rutter. 1986. "Dropping Out: How Much Do Schools Contribute to the Problem?" *Teachers College Record* 87:374–392.

Wright, J. D., and S. R. Wright. 1976. "Social Class and Parental Values for Children." *American Sociological Review* 41:527–537.

Yao, E. L. 1988. "Working Effectively with Asian Immigrant Children." *Phi Delta Kappan* 70:223–225.

Russell W. Rumberger, Ph.D., *is Associate Professor, Department of Education, University of California–Santa Barbara. His primary fields of interest are educational achievement, education and work, and education policy. He is currently studying the causes and consequences of dropping out of school and the changing educational requirements of work.*

Rita Ghatak, Ph.D., *is Program Director, Personal Assistance, Research and Development, Palo Alto, California, where she works with caregivers for the elderly.*

Gary Poulos, MS, *is Principal, San Mateo High School, San Mateo, California.*

Philip L. Ritter, Ph.D., *is Research Associate, Stanford Center for the Study of Families, Children, and Youth, Stanford University, Stanford, California. His primary field of interest is anthropology. He is currently studying family processes and education in a multicultural high school population.*

Sanford M. Dornbusch, Ph.D., *is Reed-Hodson Professor of Human Biology, Sociology, and Education and Director, Stanford Center for the Study of Families, Children, and Youth, Stanford University, Stanford, California. His main field of interest is family-school relations. He is presently studying family, peer, and community influences on adolescents.*