Appendix D

Individual and Family Domain
Risk Factor Descriptions

Individual Background Characteristics: Has a learning disability or emotional disturbance
The only individual background characteristic of students found in this review to be a significant predictor of dropping out of school was whether or not the student had a learning disability or emotional disturbance. These students were those evaluated and identified by their school or school district as having these disabilities and thus being eligible to receive special education and related services under the Individuals with Disabilities Education Act (IDEA). These disabilities are two of the 12 categories of disabilities defined under the IDEA 2004 that make a child eligible for special education and related services: [1]

- Autism
- Deaf-blindness
- Hearing impairments
- Mental retardation
- Multiple disabilities
- Orthopedic impairments
- Other health impairments
- Serious emotional disturbance
- Specific learning disabilities
- Speech or language impairments
- Traumatic brain injury
- Visual impairments

Kaufman and his colleagues in an analysis of the National Education Longitudinal Study of 1988 (NELS) 8th-grade cohort in the 10th grade, found that students in special education in the spring of 1990 with specific learning disabilities were more than three times as likely to drop out as other students and those with emotional problems were more than five times as likely to drop out of school (1).

Wagner and her colleagues analyzed data from the National Longitudinal Transition Study of Special Education Students (NLTS), a national study of the school performance of students with disabilities begun in 1987 (2). These researchers found that students with learning disabilities and those identified as seriously emotionally disturbed were particularly vulnerable to dropping out. The average student with disabilities who left school early was 18 years of age at the time they dropped out and left in the final two years of high school having earned an average of only 10 credits.

Indicators

- Has an emotional disturbance
- Has a learning disability

Exemplary Programs That Address Risk Factor
Brief Strategic Family Therapy
Check & Connect
Cognitive Behavioral Therapy for Child Sexual Abuse
Coping Power
Fast Track
Functional Family Therapy

---

[1]*26th Annual (2004) report to Congress on the implementation of the Individuals with Disabilities Education Act*, volume 2, Table 4-1, by the Office of Special Education Programs, Washington, DC: U. S. Department of Education, Office of Special Education and Rehabilitation Services.

Helping the Noncompliant Child
Linking Interests of Families & Teachers
Multidimensional Treatment Foster Care
Multisystemic Therapy
Preventive Treatment Program
Strengthening Families Program
Strengthening Families Program for Parents and Youth 10-14
Success for All
Trauma-Focused Cognitive Behavioral Therapy

Bibliography
(1) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(2) Wagner, M., Blackorby, J., & Hebbeler, K. (1993, December). *Beyond the report card: The multiple dimensions of secondary school performance of students with disabilities. A report from the National Longitudinal Transition Study of Special Education Students*. Menlo Park, CA: SRI International for the Office of Special Education Programs, U.S. Department of Education. Available online at
http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/24/5b/17.pdf

Early Adult Responsibilities: High Number of Work Hours
Findings from the High School and Beyond (HS&B) survey of the sophomore class of 1980 indicate that putting in more than 15 hours a week on a job increases the likelihood that a student will drop out of school (1). While the overall dropout rate was 12 percent, the rate for students who worked 15 or more hours per week was 18 percent, 50 percent higher than those either not working or working less than 15 hours per week. For those working 22 or more hours per week, the dropout rate was 22 percent, or 100 percent higher than for other students.

A multivariate analysis of the HS&B data found differing effects of employment on dropout rates by race/ethnicity and gender (1). White males who worked were more likely to drop out regardless of the number of hours worked, while working 15 or more hours increased the risk for Hispanic males and 22 or more hours for Black males. White females were more likely to drop out if they worked 15 or more hours and Hispanic females if they worked under 22 hours but not over 22 hours. The risk of dropping out for Black females was not significantly impacted by employment status or number of hours worked.

Similar results were found for those employed in the National Education Longitudinal Study (NELS) (2). Working more than 20 hours a week while in school was a significant predictor of dropping out of school for both early (between 8th and 10th) and late (between 10th and 12th) dropouts, although it decreased in importance in later high school grades. Employment status was detrimental to completing school regardless of socioeconomic status. The researchers concluded that getting early experience in the labor market does not provide benefits after high school and only serves to increase the chances that a student will not graduate.

Indicators
▪ Amount of time spent each week working for pay on a job

117

Exemplary Programs That Address Risk Factor
No programs found with evidence that they directly addressed this risk factor.

Bibliography
(1) Barro, S. M., & Kolstad, A. (1987, May). *Who drops out of high school? Findings from High School and Beyond*. Washington, DC: Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(2) Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, *36* (4), 715-738.

Early Adult Responsibilities: Parenthood

One of the consequences of becoming a parent while still in school is an increase in the likelihood of not graduating. Although they made up less than 5 percent of the sample, students in the High School and Beyond (HS&B) survey sample who reported being married, having children or both, made up 22 percent of the dropouts (1). Both marriage and parenthood dramatically increased the likelihood that female students of all race/ethnic groups dropped out of school. Forty percent of all female dropouts were married, had children or both. Married female students with children, regardless of race/ethnicity, were six times as likely to drop out of school as single, childless female students. Marriage and parenthood both significantly impacted the dropout rate for White males, and marriage significantly impacted the dropout rate for Hispanic males. Marriage and parenthood did not significantly impact the dropout rate for Black males.

In a longitudinal study of a sample of 7th graders in three separate communities, researchers found that all of the students who became parents during the study period dropped out of school (2). This included 15 students or 3 percent of the sample, nine females and six males. The majority of these students were already at high risk of dropping out prior to parenthood, due to high aggression ratings and low achievement.

Gleason and Dynarski (3), in an analysis of data from secondary schools in four cities, found that the dropout rate among high school students who had a child was 32 percent, while the average rate for all high school students in the sample was 15 percent. This was the highest dropout rate for any one risk factor analyzed, including high absenteeism (27 percent) and being over-age for grade more than two years (28 percent).

Indicators
▪ Has a child

Exemplary Programs That Address Risk Factor
Adolescent Sexuality & Pregnancy Prevention Program
Nurse-Family Partnership
Quantum Opportunities
Skills, Opportunities, and Recognition (SOAR)
Teen Outreach Program

Bibliography

(1) Barro, S. M., & Kolstad, A. (1987, May). *Who drops out of high school? Findings from High School and Beyond*. Washington, DC: Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

(2) Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. *Child Development*, *60*, 1437-1452.

(3) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.

Social Attitudes, Values, and Behavior: High-Risk Peer Group

Researchers have found that affiliating with high-risk peers who drop out or engage in various types of antisocial behavior increases the risk of dropping out. When Battin-Pearson and colleagues (1) followed an ethnically diverse sample of 5th graders until they were 16, they found that, in addition to poor academic achievement, bonding to antisocial peers significantly increased the risk that a student would leave school early. Antisocial behavior included drug and alcohol use, misbehavior at school as well as any illegal behavior (such as stealing or vandalism) that could have gotten them in trouble with police. Those with close friendships to antisocial peers at age 14 were much more likely to leave high school early, regardless of how well they were doing academically at that age.

Other researchers found the same to be true of those who were close friends with peers who had dropped out. Cairns and several colleagues (2) gathered information on peer social group membership by asking students who their best friends were and obtaining descriptions of social cliques at their school. They found that students who dropped out of high school, whether they were male or female, had close friends in the 7th grade who also later dropped out. In their analysis of "intellectually capable dropouts" (students with grades of C or better and with IQ or test scores above the 30th percentile), Elliott and Voss found that exposure to dropout through close high school friends who dropped out was a relatively strong predictor of dropout (3).

Indicators

- Has close friendships with peers who are involved in high-risk, antisocial behavior (drug and alcohol use, misbehavior at school, illegal behavior, trouble with police, violence, or aggression)
- Has close friends who are likely to or have dropped out

Exemplary Programs That Address Risk Factor

Brief Strategic Family Therapy
CASASTART
Keepin' it REAL
Linking Interests of Families & Teachers
Multidimensional Family Therapy
Preventive Treatment Program

Bibliography

(1) Battin-Pearson, S., Newcomb, M. D., Abbott, R. D., Hill, K. G., Catalano, R. F., & Hawkins, J. D. (2000). Predictors of Early High School Dropout: A test of five theories. *Journal of Educational Psychology*, *92*(3), 568-582.

(2) Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. *Child Development*, *60*, 1437-1452.

(3) Elliott, D. S., & Voss, H. L. (1974). *Delinquency and Dropout*. Lexington, MA: Lexington Books, D. C. Heath and Company.

Social Attitudes, Values, and Behavior: High-Risk Social Behavior
Battin-Pearson and colleagues found in their sample of 5th graders that, in addition to poor academic achievement, involvement in deviant behavior significantly increased the risk that a student would leave school early (1). Students were asked at age 14 about types of behaviors they were involved in during the past year. Deviant behaviors included self-reports of the use of alcohol and various other types of drugs; violent behavior, such as hitting someone or using a weapon to steal from someone; and nonviolent illegal behaviors, such as vandalism or theft. Regardless of how well they were performing in school, students involved in deviant behavior were much more likely to leave school before the end of the 10th grade than other students.

These findings were reinforced through other studies. Two studies found links between substance use and dropout. One was a study of neighborhood effects on high school graduation in the Chicago metropolitan area that found that adolescents who reported heavy use of marijuana (40 or more times during lifetime) were less likely to graduate from high school (2). In a second study, an analysis of data from the National Education Longitudinal Study (NELS), students who smoked cigarettes were more than seven times as likely to drop out as were students who did not smoke (3). A third study found a link between being in "serious trouble with the law" and dropping out of school for both males and females (4).

Indicators
- Has been involved in high-risk, antisocial behavior (drug and alcohol use, misbehavior at school, illegal behavior, trouble with police, violence or aggression)
- Has previously dropped out of school
- Number of arrests

Exemplary Programs That Address Risk Factor
Across Ages
Adolescent Transitions Program
Athletes Training and Learning to Avoid Steroids
Big Brothers Big Sisters
Brief Strategic Family Therapy
CASASTART
Cognitive Behavioral Therapy for Child Sexual Abuse
Coping Power
Family Matters
Functional Family Therapy
Good Behavior Game
Guiding Good Choices
Helping the Noncompliant Child
Keepin' it REAL
LifeSkills Training
Linking Interests of Families & Teachers
Midwestern Prevention Project (Project STAR)
Multidimensional Family Therapy
Multidimensional Treatment Foster Care
Multisystemic Therapy
Nurse-Family Partnership

Parenting Wisely
Preventive Treatment Program
Project Toward No Drug Abuse
Project Towards No Tobacco Use
Prolonged Exposure Therapy for PTSD
Safe Dates
School Transitional Environment Program (STEP)
Skills, Opportunities, and Recognition (SOAR)
Strengthening Families Program
Strengthening Families Program for Parents and Youth 10-14
Too Good for Violence
Trauma-Focused Cognitive Behavioral Therapy

Bibliography
(1) Battin-Pearson, S., Newcomb, M. D., Abbott, R. D., Hill, K. G., Catalano, R. F., & Hawkins, J. D. (2000). Predictors of Early High School Dropout: A test of five theories. *Journal of Educational Psychology*, *92*(3), 568-582.
(2) Ensminger, M. E., Lamkin, R. P., & Jacobson, N. (1996). School leaving: A longitudinal perspective including neighborhood effects. *Child Development*, *67*, 2400-2416.
(3) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(4) Wehlage, G. G., & Rutter, R. A. (1986). Dropping out: How much do schools contribute to the problem? *Teachers College Record*, *87*(3), 374-392.

Social Attitudes, Values, and Behavior: Highly Socially Active Outside of School
The amount of time students spent with friends outside of school was found to be related to dropping out in two studies. One study (2) found that for students with learning disabilities or an emotional disturbance who were in the 12th grade, seeing friends four or five times a week was significantly related to dropping out of school before graduating. These students spent more time with friends outside of school than students with other types of disabilities, with 61 percent of emotionally disturbed and 55 percent of learning-disabled students seeing friends four or more times per week. The researchers argue that being strongly affiliated with individual friendships outside of school, rather than bonding with friends and activities tied to school, helps to disengage students from school.

A group of researchers (1) studying two cohorts of Canadian students found similar patterns among those who were highly socially active. Regardless of other characteristics, students who had a high level of involvement with friends outside of school were more likely to leave school before graduating than students who were less involved with friends.

Indicators
▪ Amount of time spent socializing with friends in activities outside of school hours

Exemplary Programs That Address Risk Factor
No programs found.

Bibliography

(1) Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. (1997). Disentangling the weight of school dropout predictors: A test on two longitudinal samples. *Journal of Youth and Adolescence*, *26*(6), 733-762.

(2) Wagner, M., Blackorby, J., & Hebbeler, K. (1993, December). *Beyond the report card: The multiple dimensions of secondary school performance of students with disabilities*. *A report from the National Longitudinal Transition Study of Special Education Students*. Menlo Park, CA: SRI International for the Office of Special Education Programs, U.S. Department of Education. Available online at
http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/24/5b/17.pdf

School Performance: Low Achievement

Academic performance was found to be a major predictor of leaving school early in all 12 data sources, making it the only risk factor significantly related to dropout in all sources. Measures for this factor varied widely, more than for any other factor. Some studies used grades to explore the impact of achievement on dropout (4, 8, 14), others used achievement test scores (10, 18), some used both grades and test scores (6, 7, 12, 15), while a few used some combination of these and other academic factors (1, 2, 5). Some researchers used less specific indicators, such as "ever failing a class"(17) or teacher ratings of low academic competence (3).

Regardless of the measure used, low achievement was consistently found to be a major factor in dropout across decades and samples. The impact of low achievement was found to start early and to impact a student at all school levels, throughout his or her school career. Two longitudinal studies tracking factors influencing dropout from the 1st grade up to dropping out, found that low achievement in 1st grade was a major predictor of later dropout (1, 6, 7). In addition to 1st grade, other grade levels where at least two studies found low achievement significantly increased the chances that a student would drop out of school included: 8th grade (2, 8, 9, 10, 14), 9th grade (5, 8), and 10th grade (1, 4, 18).

A stark example of the impact that low achievement can have on dropout comes from the relationship found between mathematics achievement test scores and dropping out among the 8th-grade cohort in the National Education Longitudinal Study (NELS) (10). Twelve years after being surveyed, 33 percent of the students scoring in the lowest mathematics achievement quartile in 8th grade, 15 percent of those scoring in the two middle quartiles, and 4 percent of those scoring in the highest quartile had not received a high school diploma.

Other indications that academic performance is a major factor in leaving school early come from dropouts themselves. Poor academic performance was given as one of the major reasons that dropouts left school before graduation in two national surveys. "Got poor grades" was one of the two primary reasons dropouts gave for leaving school early in the national High School and Beyond survey (4). A little over a third (33 percent) of dropouts reported this as a primary reason for dropping out. In the National Education Longitudinal Study (NELS), 41 percent of dropouts reported leaving because they "were failing at school" and another third (31 percent) because they "couldn't keep up with schoolwork"(13).

There were differences found among subgroups of students on the impact of low achievement on dropout. In a comparison of factors that help to distinguish between dropouts, "stay-ins" (students who finish high school but do not go on to college), and "college-bound" students, Wehlage and Rutter (18) found that academic-related factors were more likely to distinguish between "college-bound" and "stay-ins" but not between "stay-ins" and dropouts, who had more similar academic experiences. School-related factors

(truancy, expectations, discipline problems) were the ones that best distinguished dropouts from "stay-ins."

A few studies found differences in the impact of low achievement on dropout between males and females. In a three-community study (3), teacher ratings of academic competence in grade 7 were only significantly related to dropout for boys. Low achievement for girls impacted dropout only in combination with other risk factors, particularly high aggression and being older than classmates. For example, 47 percent of girls who were highly aggressive and had really low achievement in the 7th grade dropped out prior to completing the 11th grade. Ensminger and Slusarcick (7) had similar findings on dropout and gender: grades in 1st grade had a major impact on dropping out for boys but not for girls. Grades in 1st grade were only a significant factor for non-poor girls in their sample.

Indicators
- Grade point average
- Subject grades
- Achievement test scores
- Reading level
- Whether failed any courses
- Overall academic success

Exemplary Programs That Address Risk Factor
Adolescent Sexuality & Pregnancy Prevention Program
AVID
Big Brothers Big Sisters
Check & Connect
Coca-Cola Valued Youth Program
Families & Schools Together
Helping the Noncompliant Child
LA's BEST
Multidimensional Family Therapy
Project GRAD
Quantum Opportunities
Schools & Families Educating Children
School Transitional Environment Program (STEP)
Skills, Opportunities, and Recognition (SOAR)
Success for All
Teen Outreach Program

Bibliography
(1) Alexander, K. L., Entwisle, D. R., & Kabbani, N. S. (2001, October). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, *103*(5), 760-822.
(2) Battin-Pearson, S., Newcomb, M. D., Abbott, R. D., Hill, K. G., Catalano, R. F., & Hawkins, J. D. (2000). Predictors of early high school dropout: A test of five theories. *Journal of Educational Psychology*, *92*(3), 568-582.
(3) Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. *Child Development*, *60*, 1437-1452.
(4) Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1986). Who drops out of high school and why? Findings of a national study. *Teachers College Record*, *87*(3), 3576-3730.

(5) Elliott, D. S., & Voss, H. L. (1974). *Delinquency and Dropout*. Lexington, MA: Lexington Books, D. C. Heath and Company.

(6) Ensminger, M. E., Lamkin, R. P., & Jacobson, N. (1996). School leaving: A longitudinal perspective including neighborhood effects. *Child Development*, *67*, 2400-2416.

(7) Ensminger, M. E., & Slusarcick, A. L. (1992, April). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. *Sociology of Education 65*, 95-113.

(8) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.

(9) Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, *36* (4), 715-738.

(10) Ingels, S. J., Curtin, T. R., Kaufman, P., Alt, M. N., & Chen, X. (2002, March). *Coming of age in the 1990s: The eighth-grade class of 1988 12 years later*. (NCES 2002-321). Washington, DC: National Center for Education Statistics, U. S. Department of Education.

(11) Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. (1997). Disentangling the weight of school dropout predictors: A test on two longitudinal samples. *Journal of Youth and Adolescence*, 26(6), 733-762.

(12) Jimerson, S., Egeland, B., Sroufe, L. A., & Carlson, B. (2000). A prospective longitudinal study of high school dropouts examining multiple predictors across development. *Journal of School Psychology*, *38*(6), 525-549.

(13) Jordan, W. J., Lara, J., & McPartland, J. M. (1994, August). *Exploring the complexity of early dropout causal structures*. Report No. 48, ERIC No. ED 375 227. Baltimore, MD: Center for Research on Effective Schooling for Disadvantaged Students, Johns Hopkins University.

(14) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

(15) Lloyd, D. N. (1978, Winter). Prediction of school failure from third-grade data. *Educational and Psychological Measurement*, *38*(4), 1193-1200.

(16) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, 32(3), 583-625.

(17) Wagner, M., Blackorby, J., & Hebbeler, K. (1993, December). *Beyond the report card: The multiple dimensions of secondary school performance of students with disabilities*. *A report from the National Longitudinal Transition Study of Special Education Students*. Menlo Park, CA: SRI International for the Office of Special Education Programs, U.S. Department of Education. Available online at http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/24/5b/17.pdf

(18) Wehlage, G. G., & Rutter, R. A. (1986). Dropping out: How much do schools contribute to the problem? *Teachers College Record*, *87*(3), 374-392.

School Performance: Retention/Over-age for Grade

Nine analyses of seven data sources found that being held back and having to repeat a grade was a major predictor of dropping out before graduation. Being retained was found to be linked to dropout in at least two studies at every school level, from 1st grade on up through high school. One study found, for example, that middle school students who had been held back at some time in school had six times the odds of dropping out as students not held back (8). And, although correlated to academic achievement, retention had an impact on dropping out independent of academic performance and other school experiences and personal characteristics. Something about the experience of being retained and being older than grade level peers increases the likelihood of dropping out.

Several researchers (1), in their analysis of patterns in Baltimore schools, found that the strongest predictors of dropout were retention in middle school and 1st grade. Retention during other elementary grades also significantly impacted dropout, but not to the same degree as when it occurred in 1st grade or in middle school. Lloyd (7) found retention between 1st and 3rd grades significantly related to dropout for both boys and girls.

In the National Education Longitudinal Study (NELS) cohort, later retention was more likely to lead to dropout than earlier retention (6). Students who had been retained between kindergarten and 4th grade were about three times as likely as other students to later drop out and those being retained between 5th and 8th grade were about seven times as likely to drop out. The same pattern was found in an analysis of programs in four cities across the U.S., where those over-age two or more years in 9th grade were more likely to drop out two or three years later than those over-age two or more years in 6th grade (16 percent and 28 percent respectively) (3). Average dropout rates for the middle school sample were 6 percent and 15 percent for the high school sample.

Goldschmidt and Wang (4) found retention to be the strongest predictor for early dropouts, those that leave school between the 8th and 10th grades. Being retained doubled the probability that a student dropped out. Retention was also an important predictor for high school dropout (between 10th and 12th grades) but a less significant factor than behavior.

One aspect of retention that makes it so powerful is that its effects appear to be additive, where multiple retentions dramatically increase the chances that a student will leave school before graduating. This additive quality was found in the Baltimore analysis (1), in the four-city sample of middle and high schools (3), and in a dropout study in three diverse communities (2). Thirty-six percent of repeaters were retained two or more times in the Baltimore sample and 80 percent of these multiple repeaters left school without graduating (1). Ninety-four percent of students retained in both elementary and middle school dropped out (1).

The pattern in findings in the three-community study with increasing retentions before 7th grade illustrates the progressive nature of retention's impact (2). The dropout rate for those students who had not failed a grade was 7 percent; for those failing one grade, it was 27 percent; for two grade levels, it was 57 percent; and for three grade levels, it was 100 percent.

One study found differences in the impact of retention on dropout by race/ethnicity (8). Retention in the NELS sample had the most impact on White students, followed by Hispanic students but had no impact on African-American students, although African-Americans (and Hispanics) were more likely than Whites to have been held back.

Indicators
- Failed a grade
- Over-age for grade level

Exemplary Programs That Address Risk Factor
CASASTART
Preventive Treatment Program

Bibliography
(1) Alexander, K. L., Entwisle, D. R., & Kabbani, N. S. (2001, October). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, *103*(5), 760-822.

(2) Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. *Child Development*, *60*, 1437-1452.

(3) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.

(4) Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, *36*(4), 715-738.

(5) Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. (1997). Disentangling the weight of school dropout predictors: A test on two longitudinal samples. *Journal of Youth and Adolescence*, *26*(6), 733-762.

(6) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

(7) Lloyd, D. N. (1978, Winter). Prediction of school failure from third-grade data. *Educational and Psychological Measurement*, *38*(4), 1193-1200.

(8) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.

(9) Wagner, M., Blackorby, J., & Hebbeler, K. (1993, December). *Beyond the report card: The multiple dimensions of secondary school performance of students with disabilities*. *A report from the National Longitudinal Transition Study of Special Education Students*. Menlo Park, CA: SRI International for the Office of Special Education Programs, U.S. Department of Education. Available online at http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/24/5b/17.pdf

School Engagement: Poor Attendance

One of the primary student behaviors used as a gauge of school engagement is attendance, particularly when measured through absenteeism. Absenteeism was found in various studies to impact dropout over and above other personal characteristics, attitudes, and behaviors at all school levels. Evidence was found in at least two studies on the impact of absenteeism at the middle school level (2, 3) and high school level (2, 4, 5).

In looking at the impact of 1st grade measures on dropping out of high school in schools in Baltimore, Alexander and his colleagues (1) examined both lateness and absences in school behaviors. Absences in the 1st grade were found to be significantly related to leaving school before graduation but not lateness. Multivariate analysis indicated that with each additional day absent in a school year, regardless of other factors, a student's chance of dropping out increased by 5 percent. The average number of absences for dropouts was 16 compared to 10 for graduates, or a 30 percent increase in the chance of dropping out for these students over the chances for graduates (1).

Students surveyed who were participating in nationally funded dropout prevention programs reporting high absenteeism (20 or more absences during the school year) in both middle and high school were significantly more likely to drop out two to three years later (2). Absenteeism was one of the two best predictors for those dropping out in middle school. Fifteen percent of middle school students with high 6th-grade absenteeism dropped out as compared to the overall middle school dropout rate of 6 percent. The impact was even greater in high school, where it was one of the top four factors predicting dropout (2). Twenty-seven percent of those who had high absenteeism in their 9th-grade year had dropped out two or three years later (as compared to an overall high school dropout rate of 15 percent).

Other aspects of poor attendance analyzed by researchers in several national surveys included cutting classes (3), truancy (5) and tardiness (3), all of which were found to be linked to dropping out. Regardless of personal characteristics or school experiences, students in a national survey who cut classes once a

week or more were about six times as likely to drop out as students who never cut classes (3). For students who were tardy 10 or more times in the month before the survey, their chances of dropping out were almost seven times those of students who were never tardy (3). In an analysis of the dropouts surveyed in the High School and Beyond survey, Wehlage and Rutter (5) found that among academically similar peers, one of the primary factors setting dropouts apart from students who graduated was truancy.

Indicators
- Number of absences from school
- Number of days truant
- Number of days tardy
- Number of classes cut

Exemplary Programs That Address Risk Factor
Across Ages
Big Brothers Big Sisters
Career Academy
Check & Connect
LA's BEST
School Transitional Environment Program (STEP)

Bibliography
(1) Alexander, K. L., Entwisle, D. R., & Horsey, C. S. (1997, April). From first grade forward: Early foundations of high school dropout. *Sociology of Education*, *70*(2), 87-107.
(2) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.
(3) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(3) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.
(4) Wagner, M., Blackorby, J., & Hebbeler, K. (1993, December). *Beyond the report card: The multiple dimensions of secondary school performance of students with disabilities*. *A report from the National Longitudinal Transition Study of Special Education Students*. Menlo Park, CA: SRI International for the Office of Special Education Programs, U.S. Department of Education. Available online at http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/24/5b/17.pdf
(5) Wehlage, G. G., & Rutter, R. A. (1986). Dropping out: How much do schools contribute to the problem? *Teachers College Record*, *87*(3), 374-392.

School Engagement: Low Educational Expectations
Another aspect of school engagement encompasses expectations for school attainment. There was evidence in at least two studies to support the significance of the impact of these expectations at two school levels—middle and high school. These expectations were assessed through surveys or interviews with students. Students were asked about their current and future goals for education, whether they expected to graduate from high school and, if so, what their plans were for education beyond graduation.

127

Ensminger and Slusarcick (1) found in their analysis of longitudinal data on students from inner-city Chicago schools that adolescent males and females with low educational expectations were significantly more likely to drop out. Both males and females were more likely to have high expectations if their mothers also had high educational expectations for them. And, for males whose mothers had less than a high school education, regardless of other personal characteristics, attitudes, or behaviors, the student having high expectations made it much more likely that they would graduate.

Similar results were found in analyses of data from the National Education Longitudinal Study (NELS). Regardless of other behaviors, attitudes, or characteristics, students with low expectations for school attainment in the 8th grade were twice as likely as other students to drop out (4).

Not being sure of high school graduation in the 9th grade was found to be one of the top five predictors of dropping out among students surveyed who were participating in nationally funded dropout prevention programs. Twenty-five percent of 9th graders who expressed doubts about graduation dropped out two to three years later (compared to a 15 percent average sample rate) (2). Having doubts about graduation in the 6th grade, however, was not a significant predictor of dropping out before 8th or 9th grade.

Students surveyed for the High School and Beyond (HS&B) survey who reported high educational expectations in the 10th grade were significantly less likely to drop out than students with low expectations (5). One interesting thing to note about these dropouts, however, was that although they had lower expectations for school attainment than students who graduated, the average dropout did <u>not</u> expect as sophomores that they would leave high school without graduating. Instead, not only did the average dropout expect to finish high school, they also expected to take some junior college courses (5).

Indicators
- Certainty of graduating from high school
- Hopes or expectations of getting education beyond high school graduation
- Amount of formal schooling they expect to get in the future

Exemplary Programs That Address Risk Factor
LA's BEST
Quantum Opportunities
School Transitional Environment Program (STEP)

Bibliography
(1) Ensminger, M. E., & Slusarcick, A. L. (1992, April). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. *Sociology of Education 65*, 95-113.
(2) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.
(3) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(4) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.
(5) Wehlage, G. G., & Rutter, R. A. (1986). Dropping out: How much do schools contribute to the problem? *Teachers College Record*, *87*(3), 374-392.

School Engagement: Lack of Effort

Kaufman and his colleagues (2) looked at several measures of school effort collected on 8th-grade students in the National Education Longitudinal Study (NELS). Students surveyed who reported doing no homework per week were eight times more likely to drop out between the 8th and 10th grades as students doing at least some homework. Students whose teachers reported that they rarely completed homework were six times as likely to drop out.

Another survey of students participating in nationally funded dropout prevention programs had similar findings for homework (1). Spending less than one hour per week on homework in high school increased the likelihood that a student dropped out. Twenty-one percent of students reporting doing little homework in high school dropped out, compared to 15 percent of the overall high school sample. There was essentially no relationship found between hours spent on homework in middle school and dropping out.

Several other measures were analyzed from the NELS related to level of school effort. Students who reported that they were usually unprepared for class were more than eight times as likely to drop out as those who reported that they were always prepared for class (2). Even coming to class prepared only infrequently significantly reduced chances of dropping out relative to those who never came to class unprepared.

Teachers on the NELS also assessed whether students in the 8th grade were performing below their ability in their class (2). Students judged to be performing below ability were more than three times as likely to drop out of school as other students.

Indicators

- Number of hours spent on homework
- Whether performing up to their ability
- Frequency of going to class unprepared

Exemplary Programs That Address Risk Factor

Coca-Cola Valued Youth Program
Multidimensional Family Therapy
Skills, Opportunities, and Recognition (SOAR)
The Incredible Years

Bibliography

(1) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.
(2) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

School Engagement: Low Commitment to School

One group of attitudes and behaviors that can serve as a warning that a student is detaching from school are those that reflect commitment to school. General dislike of school is one of the primary indicators of low commitment to school that has been linked to school dropout. "Didn't like school" was one of the two primary reasons dropouts gave for leaving school early in the national High School and Beyond (HS&B) survey in 1980, with a third (33 percent) of dropouts reporting this as a primary reason (2). It was also the top reason given for leaving by dropouts in the 1988 National Education Longitudinal Study

(NELS), where half (51 percent) of the students surveyed reported that they dropped out because they "didn't like school"(5).

Reasons given for leaving school prior to graduation other than not liking school offer some insight into other issues these dropouts had with school that might be related to their low commitment to school. In responses of dropouts to the HS&B, two school-related and two nonschool-related reasons rounded out the top five (2). Dropouts reported getting poor grades (33 percent) and not getting along with their teachers (15 percent) as main reasons. Responsibilities and interests outside of school were also reported often as primary reasons for dropping out, including taking a job (19 percent) and getting married (18 percent).

All of the top reasons for leaving given by the NELS dropouts were related to school. These dropouts reported leaving because they were failing (44 percent), couldn't get along with teachers (34 percent), had trouble keeping up with schoolwork (31 percent), and/or felt like they didn't belong at school (25 percent). Unfortunately, it is not possible to discern in the HS&B or NELS analyses the order in which these attitudes developed. For example, did low commitment come first and cause grades to drop, or, as a result of failing grades, did the student begin detaching from school, or did both occur because of some other factor or combination of factors?

For some researchers, commitment to school involves more than just a general dislike of school. Instead, commitment to school or education includes a set of related student attitudes and behaviors in addition to general feelings about school. Elliott and Voss (3) developed a composite they called "school normlessness," which included self-reports on how well students liked school, the amount of homework they usually completed, how often they skipped school or acted out, and whether they gave teachers a lot of trouble. They found that school normlessness in the 9th grade was the most important predictor of dropping out for girls and the third most important predictor for boys.

Janosz and his colleagues (4) developed a factor for their analysis that they called "commitment to schooling." It included items relating to a student's general attitude toward school, a self-report of academic competence, the importance placed on making good grades, and personal long-term educational aspirations. In their analysis of two cohorts of White Canadian students, they found that this composite of commitment to schooling was one of the best predictors of dropout in both samples, behind grade retention and school grades (4).

A third composite measure, the most complex across studies reviewed, was used in a longitudinal study of dropout in Baltimore schools and labeled "engagement attitudes" (1). The measure encompassed a number of items related to commitment that changed over the years of the study as the students matured. Items addressed low educational expectations, self-assessment of school success, motivation for doing schoolwork and getting good grades, and general like or dislike of the school and teachers. Although assessed from 1st grade up to 9th grade, only at 9th grade were these attitudes found to significantly impact dropout. Grades and retention were the important early factors, and engagement attitudes as well as behaviors (sent to office for misbehavior, cutting class, and teacher conduct ratings) were the important later factors in predicting dropout in their analysis (1).

Indicators
- Liking or disliking school
- Level of expectations for school success
- Amount of importance placed on school success

Exemplary Programs That Address Risk Factor
Across Ages
Coca-Cola Valued Youth Program
LA's BEST
School Transitional Environment Program (STEP)

Bibliography
(1) Alexander, K. L., Entwisle, D. R., & Kabbani, N. S. (2001, October). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, *103*(5), 760-822.
(2) Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1986). Who drops out of high school and why? Findings of a national study. *Teachers College Record*, *87*(3), 3576-3730.
(3) Elliott, D. S., & Voss, H. L. (1974). *Delinquency and Dropout*. Lexington, MA: Lexington Books, D. C. Heath and Company.
(4) Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. (1997). Disentangling the weight of school dropout predictors: A test on two longitudinal samples. *Journal of Youth and Adolescence*, *26*(6), 733-762.
(5) Jordan, W. J., Lara, J., & McPartland, J. M. (1994, August). *Exploring the complexity of early dropout causal structures*. Report No. 48, ERIC No. ED 375 227. Baltimore, MD: Center for Research on Effective Schooling for Disadvantaged Students, Johns Hopkins University.

School Engagement: No Extracurricular Participation

Elliott and Voss (1) found that increases in school social isolation in high school significantly increased the likelihood that girls would drop out of school. Isolation was indicated by low or no involvement in school clubs or other school activities, and self-reports of being far outside of the "center of things" at their high school. They did not find the same pattern for boys.

In the National Education Longitudinal Study (NELS) (2), researchers found that students who reported participating in extracurricular activities in the 8th grade had a dropout rate of 6 percent as compared to 18 percent for those who reported not participating in these activities.

In a study of students with disabilities (3), researchers found that students who belonged to school or community groups in grades nine through 12 were significantly less likely to drop out of school than their peers who were not involved in these types of groups. In addition, the impact of these affiliations in reducing the chances of dropping out also *increased* between grades nine and 12. Relatively large percentages of the students with disabilities most vulnerable to dropout—those with learning disabilities or emotional disturbances—were members of school or community groups (46 percent and 37 percent, respectively). Students in the disability categories of deaf or visually impaired, the two categories with the lowest dropout rates, were the most likely to belong to these types of groups, with 56 percent and 50 percent involved, respectively. The researchers argue that being strongly affiliated with groups tied to school, rather than bonding with friends and activities not related to school, helps to keep students engaged in school.

Indicators
- Amount of participation in extracurricular activities (e.g., sports, clubs, chorus, or school newspaper)
- Memberships in school or school-based community groups

Exemplary Programs That Address Risk Factor
Across Ages
Adolescent Sexuality & Pregnancy Prevention Program
CASASTART
Coca-Cola Valued Youth Program
Families and Schools Together
LA's BEST
Multidimensional Family Therapy
Quantum Opportunities

Bibliography
(1) Elliott, D. S., & Voss, H. L. (1974). *Delinquency and Dropout*. Lexington, MA: Lexington Books, D. C. Heath and Company.
(2) Ingels, S. J., Curtin, T. R., Kaufman, P., Alt, M. N., & Chen, X. (2002, March). *Coming of age in the 1990s: The eighth-grade class of 1988 12 years later*. (NCES 2002-321). Washington, DC: National Center for Education Statistics, U. S. Department of Education.
 (3) Wagner, M., Blackorby, J., & Hebbeler, K. (1993, December). *Beyond the report card: The multiple dimensions of secondary school performance of students with disabilities. A report from the National Longitudinal Transition Study of Special Education Students*. Menlo Park, CA: SRI International for the Office of Special Education Programs, U.S. Department of Education. Available online at
http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/24/5b/17.pdf

School Behavior: Misbehavior
School misbehavior was found to be a major predictor of dropout in five of the 12 data sources. As for many of the other factors, there was a range of measures used to capture student misbehavior and discipline problems at school. Problem behaviors in one longitudinal study were measured by teacher's ratings of each child on psychopathology (6) and in another by a composite of "engagement behaviors," such as cutting classes and disciplinary problems in school (1). Other measures used included reports of number of times sent to the office (7) or combinations of behaviors, including behaviors like cutting classes (3), getting suspended (2, 3, 9), and getting into trouble with police (2, 3, 9). While most studies (2, 3, 4, 7, 8, 9) relied on student self-reports of behavior, others used reports by teachers (1, 6).

Problem behaviors in one longitudinal study, based on a teacher's ratings of a student's behavior, found that problem behaviors at 1st grade and at age 16 were significantly related to high school status by age 19 (6). In another study, disciplinary problems during 6th grade increased a student's likelihood of dropping out two to three years later and problems during the 9th grade had an even larger impact (4). Nine percent of those with disciplinary problems in the 6th grade had dropped out two to three years later, and 23 percent of those with disciplinary problems in 9th grade had dropped out two to three years later (compared to sample averages of 6 percent and 15 percent respectively) (4).

Another study of inner-city Chicago schools, however, had findings slightly different from those described above. Researchers in this study found that behavior problems at school in the 9th grade (sent to office for misbehavior, cutting class, and teacher conduct ratings) but not in the 1st or 6th grade were significantly linked to dropout (1). In their analysis, early grades and retention through elementary and middle school were keys, while in high school, behaviors and attitudes become more influential (1).

Analyses of two national surveys also identified school misbehavior as a significant risk factor for dropout. Links were found between behavior problems in school and dropping out in the High School and

Beyond survey data (2,3,9). In one analysis, the two major predictors of dropout were having behavioral problems (cutting classes, been suspended, trouble with police) and low grades, with behavior having a greater impact on dropping out (3). Students with the most behavior problems tended to be males with low verbal ability who reported feeling that they had little control over their lives (3).

In the National Education Longitudinal Study (NELS) data, regardless of other experiences and personal characteristics, 8th-grade misbehavior was the strongest predictor for late dropouts (between 10th and 12th grades) and the second strongest predictor for early dropouts (between 8th and 10th grades) (5). Eighth-grade students who had been sent to the office for misbehaving were more likely to drop out than students who had never been sent to the office, and the chances of dropping out dramatically increased with the number of times they got into trouble (7). Students who had been sent to the office once or twice in their 8th-grade year were three and a half times as likely to drop out between the 8th and 10th grades as those who never were sent to the office. Those sent to the office more than twice during that year were six and a half times as likely to drop out between the 8th and 10th grades as those never sent to the office (7).

It was also clear in the NELS that not only was individual misbehavior a major risk factor for dropout, but the percentages of the student population misbehaving in both middle and high schools was a significant factor that increased the chances of any student at the school to drop out (5).

Barro and Kolstad (2) found the relationship between dropout and antisocial behavior to be especially strong and consistent across gender and race/ethnicity. Another study, however, found a significant relationship between misbehavior and dropout for White and Black students but not for Hispanic students (8). In a third study, males were more than twice as likely as females to report dropping out because of behavior problems (3). Twenty-one percent of male dropouts said a major reason they left school was because they couldn't get along with teachers in the 10th grade and 13 percent because of being expelled or suspended (9 percent and 5 percent, respectively, for females) (3).

While exploring patterns in the NELS data, Wehlage and Rutter (9) found that dropouts differed from their academically similar peers because of problem behaviors like discipline problems, truancy, and lateness. These differences were the characteristics that best distinguished dropouts from non-college-bound graduates (9).

Indicators
- Number of times sent to the office for misbehavior
- Number of warnings sent home about behavior
- Number of suspensions/expulsions

Exemplary Programs That Address Risk Factor
Adolescent Transitions Program
Brief Strategic Family Therapy
Children of Divorce Intervention Program
Coping Power
Families & Schools Together
Fast Track
Good Behavior Game
Linking Interests of Families & Teachers
Multidimensional Family Therapy
Preventive Treatment Program
Project GRAD

133

Promoting Alternative Thinking Strategies (PATHS)
Responding in Peaceful and Positive Ways
School Transitional Environment Program (STEP)
Skills, Opportunities, and Recognition (SOAR)
Teen Outreach Program
The Incredible Years
Too Good for Violence

Bibliography
(1) Alexander, K. L., Entwisle, D. R., & Kabbani, N. S. (2001, October). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, *103*(5), 760-822.
(2) Barro, S. M., & Kolstad, A. (1987, May). *Who drops out of high school? Findings from High School and Beyond*. Washington, DC: Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(3) Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1986). Who drops out of high school and why? Findings of a national study. *Teachers College Record*, *87(3)*, 3576-3730.
(4) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.
(5) Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, 36 (4), 715-738.
(6) Jimerson, S., Egeland, B., Sroufe, L. A., & Carlson, B. (2000). A prospective longitudinal study of high school dropouts examining multiple predictors across development. *Journal of School Psychology*, *38*(6), 525-549.
(7) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(8) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.
(9) Wehlage, G. G., & Rutter, R. A. (1986). Dropping out: How much do schools contribute to the problem? *Teachers College Record*, *87*(3), 374-392.

School Behavior: Early Aggression
Two studies in this review found that early aggression was a major factor in predicting dropout. In both studies, it was measured by teacher or principal ratings and was collected in either 1st or 7th grade. Findings from both studies indicate a direct and significant link between early aggression and dropout for males, but only one study found a link for females.

Several researchers (1), in analyzing dropout across three communities, found that students who were rated as aggressive in the 7th grade were much more likely to drop out of school before completing 11th grade. This was the case for both boys and girls. The groups of students *most* likely to drop out in their sample were those who had very high aggression scores, paired with low achievement and being older than their peers. Eighty-two percent of boys with these traits and experiences and 47 percent of girls left school before receiving a diploma. Having a higher socioeconomic status (SES) and having average or better academic performance lessened the impact of being aggressive on the chances of dropping out for boys. Eighteen percent of boys with above-average aggression who also were above average in SES and average in academic performance, dropped out before completing the 11th grade. The researchers (1) also

134

found that all six of the boys claiming to be fathers were rated as highly aggressive and all eventually dropped out.

Ensminger and Slusarcick (2) found in their analysis of longitudinal data in inner-city Chicago schools that males who were rated as aggressive by their 1st grade teachers were significantly more likely to drop out. As in the other analysis, SES was found to impact the relationship between aggression and dropping out, with non-poor adolescent males who were rated as aggressive in 1st grade being more likely to drop out than other non-poor males. The same relationship was not found, however for poor males, who were equally likely to drop out whether they were rated as aggressive or not. Although adolescents with high educational expectations were found to be significantly more likely to graduate in this analysis, expectations did not have the same effect on aggressive males. Unlike other males, males who were rated as aggressive in the 1st grade were all equally likely to drop out, regardless of their expectations.

Unlike the other study, Ensminger and Slusarcick (2) did not find a direct link between early aggressiveness and leaving school or graduation for females. Aggression was instead indirectly related to graduation for girls through another factor that <u>was</u> significantly related to graduating—a student's perception of teacher satisfaction with their performance. Particularly for non-poor girls, girls who were rated as aggressive in the 1st grade were much less likely to report teacher satisfaction with their performance, which in turn increased the likelihood that they would not graduate.

Indicators
- Level of aggression exhibited in school
- Level of aggression relative to peers

Exemplary Programs That Address Risk Factor
Families & Schools Together
Fast Track
Good Behavior Game
Helping the Noncompliant Child
Linking Interests of Families & Teachers
Promoting Alternative Thinking Strategies (PATHS)
Responding in Peaceful and Positive Ways
Schools & Families Educating Children
Strengthening Families Program

Bibliography
(1) Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. *Child Development*, *60*, 1437-1452.
(2) Ensminger, M. E., & Slusarcick, A. L. (1992, April). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. *Sociology of Education 65*, 95-113.

Family Background Characteristics: Low Socioeconomic Status
A student's family socioeconomic status (SES) is one of the family background factors most consistently found to impact a variety of student educational outcomes. Across a variety of measures, a family's SES was found to be a major risk factor for dropping out of school in 10 of the 12 data sources reviewed. Low family SES was found to be a significant contributor to dropping out in at least two studies in the following grades: 1st grade (1, 2, 7), 8th grade (4, 8, 9, 11, 13, 14), and 10th grade (3, 6, 15), and was significant for both early (between 8th and 10th grades) and later (between 10th and 12th grades) dropouts

(8). SES was measured in a variety of ways across studies: by family income (3, 7), eligibility for free lunch (4), parents' occupational level (3, 5, 12), mother's education level (12), or some combination of factors (1, 9, 10, 15).

Researchers in one analysis of the National Education Longitudinal Study (NELS) found that 82 percent of all dropouts who left school between 8th and 10th grades were from families with SES levels below the mean (11). Reasons reported for dropping out in the NELS varied by SES. Lower SES dropouts were significantly more likely to report family reasons, such as becoming a parent or to care for a family member, as their primary reasons for leaving than higher SES dropouts (11).

SES level is often found to be a more powerful influence on dropout than other factors. In analyzing predictors of early dropout (leaving before the 10th grade), Battin-Pearson and colleagues (4) found that coming from a family in poverty significantly increased the likelihood that a student would drop out of school, even if he or she made good grades.

The interaction between family SES and dropout is clearly illustrated in the pattern of dropouts in a longitudinal study of students in Baltimore. In this sample, 60 percent of youth from families in the lowest SES level dropped out, 30 percent of those in the middle level, and 15 percent of those in the highest SES level (2).

Researchers in a study of dropout in three communities found that family SES in the 7th grade was a significant factor for both males and females, but it was more closely related to dropout for females than males (5). The dropout rate for females in the two groups with the highest average family SES was 2 percent, while the rate for females in the two groups with the lowest average family SES was 30 percent.

Ensminger and Slurasick (7), in a sample of inner-city Chicago students, found that poverty impacted dropout through other variables. Poverty changed the relationship between early aggressiveness and dropping out for males. For non-poor males, aggression was a major predictor of dropping out but not for poor males. Poverty interacted with grades for girls. Non-poor girls who had low grades were more likely to drop out, but grades did not impact the chances that poor girls would drop out.

Evidence from the NELS also indicated that the school's average family SES level impacts dropout rates for students, over and above their own family SES. Dropout rates for both middle and high schools increased as the percentages of students from low-income families increased (8, 13).

Indicators
- Family income
- Receipt of federal assistance
- Eligibility for the federal free/reduced price lunch program
- Rating of parents' occupations

Exemplary Programs That Address Risk Factor
Nurse-Family Partnership

Bibliography
(1) Alexander, K. L., Entwisle, D. R., & Horsey, C. S. (1997, April). From first grade forward: Early foundations of high school dropout. *Sociology of Education*, *70*(2), 87-107.

(2) Alexander, K. L., Entwisle, D. R., & Kabbani, N. S. (2001, October). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, *103*(5), 760-822.

(3) Barro, S. M., & Kolstad, A. (1987, May). *Who drops out of high school? Findings from High School and Beyond*. Washington, DC: Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

(4) Battin-Pearson, S., Newcomb, M. D., Abbott, R. D., Hill, K. G., Catalano, R. F., & Hawkins, J. D. (2000). Predictors of Early High School Dropout: A test of five theories. *Journal of Educational Psychology*, *92*(3), 568-582.

(5) Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. *Child Development*, *60*, 1437-1452.

(6) Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1986). Who drops out of high school and why? Findings of a national study. *Teachers College Record*, *87*(3), 3576-3730.

(7) Ensminger, M. E., & Slusarcick, A. L. (1992, April). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. *Sociology of Education 65*, 95-113.

(8) Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, *36*(4), 715-738.

(9) Ingels, S. J., Curtin, T. R., Kaufman, P., Alt, M. N., & Chen, X. (2002, March). *Coming of age in the 1990s: The eighth-grade class of 1988 12 years later*. (NCES 2002-321). Washington, DC: National Center for Education Statistics, U. S. Department of Education.

(10) Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. (1997). Disentangling the weight of school dropout predictors: A test on two longitudinal samples. *Journal of Youth and Adolescence*, *26*(6), 733-762.

(11) Jordan, W. J., Lara, J., & McPartland, J. M. (1994, August). *Exploring the complexity of early dropout causal structures*. Report No. 48, ERIC No. ED 375 227. Baltimore, MD: Center for Research on Effective Schooling for Disadvantaged Students, Johns Hopkins University.

(12) Lloyd, D. N. (1978, Winter). Prediction of school failure from third-grade data. *Educational and Psychological Measurement*, *38*(4), 1193-1200.

(13) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.

(14) Teachman, J. D., Paasch, K., & Carver, K. (1996, August). Social capital and dropping out of school early. *Journal of Marriage and the Family*, *58*(3), 773-783. Retrieved March 16, 2006, from http://sys.lib.clemson.edu:2048/login?url=http://sys.lib.clemson.edu:2609/login.aspx?direct=true&db=sih&an=9610084729.

(15) Wehlage, G. G., & Rutter, R. A. (1986). Dropping out: How much do schools contribute to the problem? *Teachers College Record*, *87*(3), 374-392.

Family Background Characteristics: High Family Mobility
High family mobility that results in a number of residential moves and changes in schools can cause major disruptions in the lives of children and youth. A study of students in inner-city Chicago schools found a link between moves and the chances that a female student would drop out. Researchers (1) found that a family move between 1st grade and adolescence significantly increased a female's chances of dropping out but not a male's (1). Females whose families had moved were three times as likely to drop out as female students who had not moved.

Changing schools was found in several studies to have a significant impact on the likelihood that a student would leave school before graduation. Gleason and Dynarski (2) found that attending five or more different schools before the 6th grade was linked to dropping out two to three years later. Changing schools had a less significant impact on dropout after 9th grade.

In the National Education Longitudinal Study (NELS) data, regardless of other family and personal characteristics like socioeconomic status (SES), changing schools even one time significantly increased the likelihood that a student would leave school before graduating (3). In addition, the chances of dropping out increased steadily with each successive school change. The likelihood that a student who had changed schools once before 8th grade would drop out was almost twice that of a student who had not moved. Changing schools three times increased the chance of dropping out to about three times that of a student who had not moved. Changing schools five or more times increased the chances of dropping out to eight times that of a student who had not moved (3).

Rumberger (4) also found in his analysis of the NELS data that changing schools had a significant impact on dropping out. Results of a multivariate analysis that controlled for the effects of demographic and family background factors indicated that every time a student changed schools, his or her chances of dropping out before graduation increased by 21 percent.

Teachman and his colleagues, in an analysis of the NELS data focused on exploring various measures of social capital on dropping out, found changing schools had a major impact on dropout (5). They were unable in their analysis, however, to specify exactly why changing schools had such an impact, but were able to rule out changes in the involvement of the parents with the school as one of the factors as well as any changes in the interactions between parents and children about school activities and plans.

Indicators
- Number of family moves
- Number of schools attended

Exemplary Programs That Address Risk Factor
No programs found with evidence that they directly addressed this risk factor.

Bibliography
(1) Ensminger, M. E., Lamkin, R. P., & Jacobson, N. (1996). School leaving: A longitudinal perspective including neighborhood effects. *Child Development*, *67*, 2400-2416.
(2) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.
(3) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

(4) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.

(5) Teachman, J. D., Paasch, K., & Carver, K. (1996, August). Social capital and dropping out of school early. *Journal of Marriage and the Family*, *58*(3), 773-783. Retrieved March 16, 2006, from http://sys.lib.clemson.edu:2048/login?url=http://sys.lib.clemson.edu:2609/login.aspx?direct=true&db=sih&an=9610084729.

Family Background Characteristics: Low Education Level of Parents

Parental education level is one of the most consistent family background factors examined in relation to student educational outcomes. Although related to a family's socioeconomic status (SES), it was found to have an effect on dropout independent of family SES in four of the reviewed data sources.

Parental education was significantly related to dropping out in the NELS data of 8th graders, regardless of family income or family structure (4, 6). The higher the level of education of a students' parents, the less likely they were to drop out either between the 8th and 10th grades (4, 6) or between the 10th and 12th grades (4).

Level of education of both parents was also found to be significantly related to dropping out in the High School and Beyond (HS&B) survey of 10th graders, where an additional four years of schooling of a parent increased the chances of a student's graduation by 15 percent (1). Six additional years of schooling for either parent increased the chances of graduating by 25 percent (1).

In their analysis of two cohorts of White Canadian students, Janosz and his colleagues (5) found that the average educational level of a student's parents was one of the top five predictors of a student not completing the basic requirements for a high school diploma by the age of 22 for both cohorts. This factor and the socioeconomic status of the family were the two family characteristics among the top five dropout predictors.

Ensminger and her colleagues included mother's education in several analyses of longitudinal data from students in inner-city Chicago schools (2, 3). One analysis focused on the impact of neighborhood factors on early school leaving (2). They found that mother's education had a significant impact on dropout for both males and females. Students whose mothers had lower levels of education were more likely to drop out. In another analysis of the same students that focused more on student performance and family characteristics, researchers found less of a direct impact of mother's education on dropout (3). Mother's education impacted dropout for males through its influence on early grades and adolescent expectations. Males whose mothers had higher levels of education were more likely to make good grades in 1st grade and more likely to have higher expectations for education, both of which increased the likelihood that they would graduate. The researchers found no effect in the second analysis of mother's education on dropout for girls.

Indicators

- Amount of formal schooling completed by parents

Exemplary Programs That Address Risk Factor

Families & Schools Together

Bibliography
(1) Barro, S. M., & Kolstad, A. (1987, May). *Who drops out of high school? Findings from High School and Beyond*. Washington, DC: Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(2) Ensminger, M. E., Lamkin, R. P., & Jacobson, N. (1996). School leaving: A longitudinal perspective including neighborhood effects. *Child Development*, *67*, 2400-2416.
(3) Ensminger, M. E., & Slusarcick, A. L. (1992, April). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. *Sociology of Education 65*, 95-113.
(4) Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, *36*(4), 715-738.
(5) Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. (1997). Disentangling the weight of school dropout predictors: A test on two longitudinal samples. *Journal of Youth and Adolescence*, *26*(6), 733-762.
(6) Teachman, J. D., Paasch, K., & Carver, K. (1996, August). Social capital and dropping out of school early. *Journal of Marriage and the Family*, *58*(3), 773-783. Retrieved March 16, 2006, from http://sys.lib.clemson.edu:2048/login?url=http://sys.lib.clemson.edu:2609/login.aspx?direct=true&db=sih&an=9610084729.

Family Background Characteristics: Large Number of Siblings

The number of siblings a student has was linked to dropping out in two studies. One analysis of the High School and Beyond (HS&B) survey of 10th graders found that dropping out was linked to the number of siblings in a student's family and that risk increased with each additional sibling (1). The number of siblings had an effect on dropout independent of other factors, including socioeconomic status, family structure, religious affiliation, and religiosity (1).

The other study by Lloyd (2), based on 3rd grade data, found that the number of siblings a student had increased the likelihood that they would later drop out. The number of siblings was a significant factor for both girls and boys. Number of siblings impacted dropout, regardless of a student's academic performance during that year, prior retention, their family structure, or family socioeconomic status (2).

Indicators

▪ Number of brothers and sisters

Exemplary Programs That Address Risk Factor

Nurse-Family Partnership

Bibliography
(1) Barro, S. M., & Kolstad, A. (1987, May). *Who drops out of high school? Findings from High School and Beyond*. Washington, DC: Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(2) Lloyd, D. N. (1978, Winter). Prediction of school failure from third-grade data. *Educational and Psychological Measurement*, *38*(4), 1193-1200.

Family Background Characteristics: Not Living With Both Natural Parents

Along with socioeconomic status, a number of studies have linked dropout and other poor educational outcomes to family structure. Students living in single- or stepparent families have been found to have poorer educational outcomes (6). Family structure was found to impact dropout in three of the data

sources reviewed, including two national surveys (1, 2, 3, 4, 6, 7) and one longitudinal sample of 6th graders (5).

In an analysis of a sample of 6th graders, Lloyd (5) collected data from school records on the marital status of students' parents while they were in the 3rd grade. He used two marital status categories—(1) alive and married or (2) separated, divorced, deceased, or remarried. He found that students living with both parents were significantly more likely to graduate than those living in a household without both parents.

In the National Education Longitudinal Study (NELS) data, regardless of other family and personal characteristics like socioeconomic status (SES), living with a single parent rather than with both parents significantly increased the likelihood that a student would leave school before graduating (4). Students who lived in a single-parent family in the 8th grade were more than two and a half times as likely to drop out of school as a student who lived with both parents.

Another analysis of the NELS data found that living in a stepparent family or a divorced-mother family in the 8th grade were significantly related to dropping out of school between the 8th and 10th grades (7). Living with a never-married mother, a divorced father, or other type of guardian was not significantly related to dropping out. Researchers found that the relationship for stepparent and divorced-mother families was partially due to the increase in chances of moving schools with these family structures, but that did not explain all of the relationship between family structure and dropping out. The impact of family structure on dropout was not found to be related to differences in parent-school interactions or parent-child interactions about school in this analysis (7).

In contrast to the above analysis of NELS student dropouts, Rumberger's (6) analysis of NELS students found that only living in a stepparent family was directly linked to dropping out. Living in a single-parent family was not significantly linked to dropping out after parent educational support measures were added into the analysis. The difference between his findings and the other NELS study described above (7) may be due to the fact that Rumberger combined all of the single-parent families together while the prior analysis did not. In addition, the prior study found that only students in single-mother families were more likely to drop out but not those in other single-parent family types. Rumberger also notes that his analysis suggests that the effect of single-parent families on dropout may be indirect, in that students in these families may be more like to be retained or change schools and that these are the factors that increase the likelihood that they will leave school before graduation (6).

Rumberger's (6) analysis also uncovered some important differences between race/ethnic groups on the impact of living in stepfamilies for student outcomes. For White students, living in a stepfamily significantly increased their odds of dropping out, while for Black students, it significantly decreased their odds of dropping out. Living in a stepfamily had no significant impact on the odds that a Hispanic student would drop out.

Two analyses of the High School and Beyond (HS&B) survey of 10th graders also found a link between family structure and leaving school early (1, 2). In the analysis by Barro and Kolstad (1), living in a household without both parents increased the likelihood that a student would drop out. The risk was highest for those living in households without either parent, somewhat lower with only their fathers, and lowest for those living with only their mothers.

Indicators
- Parents' marital status
- Family members living in household with student

- Type of family/household where student lives

Exemplary Programs That Address Risk Factor
Big Brothers Big Sisters
Children of Divorce Intervention Program
Parenting Wisely
Trauma-Focused Cognitive Behavioral Therapy

Bibliography
(1) Barro, S. M., & Kolstad, A. (1987, May). *Who drops out of high school? Findings from High School and Beyond*. Washington, DC: Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(2) Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1986). Who drops out of high school and why? Findings of a national study. *Teachers College Record*, *87*(3), 3576-3730.
(3) Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, *36*(4), 715-738.
(4) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(5) Lloyd, D. N. (1978, Winter). Prediction of school failure from third-grade data. *Educational and Psychological Measurement*, *38*(4), 1193-1200.
(6) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.
(7) Teachman, J. D., Paasch, K., & Carver, K. (1996, August). Social capital and dropping out of school early. *Journal of Marriage and the Family*, *58*(3), 773-783. Retrieved March 16, 2006, from http://sys.lib.clemson.edu:2048/login?url=http://sys.lib.clemson.edu:2609/login.aspx?direct=true&db=sih&an=9610084729.

Family Background Characteristics: Family Disruption
Family disruption during the 1st grade or at some time during secondary school was found in two studies to be linked to dropout. Alexander and his colleagues (1, 2) in examining factors that impacted dropout in a sample of students in Baltimore, found that the number of family changes during the 1st grade had a significant impact on dropping out. Regardless of later school experiences and performance, and family socioeconomic status, the more family changes that a student experienced during their 1st grade year, the more likely they were to later drop out. Family changes included divorce, marriage, a family move, illness or death, or other adults coming into or leaving the household.

A study of two cohorts of Canadian students found a connection between family change and disruption in middle or high school and dropping out (3). Students who experienced a recent family disruption, frequent moves, or had a relatively large family were more likely to leave school than students who had not had these experiences.

Indicators
- Number of household changes (divorce, death, remarriage, foster care)
- Changes in household makeup

Exemplary Programs That Address Risk Factor
Big Brothers Big Sisters
Children of Divorce Intervention Program
Parenting Wisely
Trauma-Focused Cognitive Behavioral Therapy

Bibliography
(1) Alexander, K. L., Entwisle, D. R., & Horsey, C. S. (1997, April). From first grade forward: Early foundations of high school dropout. *Sociology of Education*, *70*(2), 87-107.
(2) Alexander, K. L., Entwisle, D. R., & Kabbani, N. S. (2001, October). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, *103*(5), 760-822.
(3) Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. (1997). Disentangling the weight of school dropout predictors: A test on two longitudinal samples. *Journal of Youth and Adolescence*, *26*(6), 733-762.

Family Engagement/Commitment to Education: Low Educational Expectations
As was found for student's expectations, parental expectations for education attainment for their children were important predictors of a student leaving school before graduation. Parents' and child's expectations were also found to be significantly related—when parents had high expectations for education, so did their children (1).

Ensminger & Slusarcick (1) found in their analysis of longitudinal data in inner-city Chicago schools that mothers' educational expectations for their daughters when they were adolescents were significantly related to graduation status. Mothers' expectations for schooling when their daughters were in the 1st grade, however, were not directly related to graduation status. They found no significant direct relationship between mothers' expectations for their sons and graduation status. Mothers' expectations had an indirect effect on graduating from high school for males through their impact on adolescents' hopes and expectations. Teenage males whose mothers had high educational expectations for them were more likely to have higher hopes for and expectations for future education for themselves, and males with these attitudes were significantly more likely to graduate.

Two studies using the data from the National Education Longitudinal Study (NELS) of 1988 found that, regardless of other family and personal characteristics like socioeconomic status (SES), low parental expectations for their child's education significantly increased the likelihood that the child would leave school before graduating (2, 3). Eighth-grade students whose parents did not expect them to graduate from high school were almost 14 times as likely to later drop out of school as students whose parents expected them to receive at least some college education. Even students whose parents expected them to receive at most some college education were significantly more likely to drop out than students whose parents expected them to get a four-year degree—they were 40 percent more likely to drop out (2). One analysis of NELS data also found that the impact of expectations on dropout varied among race/ethnic groups (3). Low parental expectations for education were significantly linked to dropout particularly for Blacks and also for Whites, but not for Hispanics.

Indicators
- Parent expectations about high school graduation for child
- Amount of formal schooling parents expect child to get in the future

Exemplary Programs That Address Risk Factor
No programs found with evidence that it directly addressed this risk factor.

Bibliography
(1) Ensminger, M. E., & Slusarcick, A. L. (1992, April). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. *Sociology of Education 65*, 95-113.
(2) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.
(3) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.

Family Engagement/Commitment to Education: Sibling Has Dropped Out

Not only can having close friends that drop out make it more likely that a student will drop out, but having a brother or sister who has dropped out can have a similar effect. Evidence was found in three of the data sources reviewed that having a sibling who dropped out of school increased the chances that a student would also drop out.

In the National Education Longitudinal Study (NELS) data, regardless of other family and personal characteristics like socioeconomic status (SES), having an older sibling who dropped out significantly increased the likelihood that a student would leave school before graduating, and the risk increased as the number of sibling dropouts increased (3). Eighth-grade students with one older sibling who had dropped out were more than one and a half times as likely to later drop out of school as a student with no sibling dropouts. Students with two or more dropout siblings were twice as likely to later drop out as students without dropout siblings. In another analysis of these data, researchers exploring the impact of a variety of family structures and social capital factors, like the quality of parent-school and parent-child interactions, found that 8th graders with a sibling who dropped out were almost three times as likely as other students without sibling dropouts to drop out early (4).

Elliott and Voss (1) examined the joint effect on students of having siblings as well as one or more parents that dropped out. For males, this exposure to dropout in the home was the best predictor of dropout and for females it was the second-best predictor. The researchers found that this exposure to dropout at home, based on the factors they analyzed, explained the connection between socioeconomic status and dropout in their sample. It appeared to them that lower-class youth were more likely to have a family member who had dropped out, which increased their own chances of dropping out.
The other study finding a significant link between having a sibling who dropped out and a student dropping out was from surveys of students participating in nationally funded dropout prevention programs (2). Ninth-grade students who had a sibling who had dropped out of school were more likely to dropout two to three years later than those who did not have a sibling who dropped out. Twenty-one percent of 9th-grade students who had a sibling drop out also dropped out, compared to 15 percent of the overall high school sample. There was only a small relationship between having a sibling who dropped out and dropping out for middle school students.

Indicators
- School status of brothers and sisters

Exemplary Programs That Address Risk Factor
No programs found with evidence that it directly addressed this risk factor.

144

Bibliography

(1) Elliott, D. S., & Voss, H. L. (1974). *Delinquency and Dropout*. Lexington, MA: Lexington Books, D. C. Heath and Company.

(2) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.

(3) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

(4) Teachman, J. D., Paasch, K., & Carver, K. (1996, August). Social capital and dropping out of school early. *Journal of Marriage and the Family*, *58*(3), 773-783. Retrieved March 16, 2006, from http://sys.lib.clemson.edu:2048/login?url=http://sys.lib.clemson.edu:2609/login.aspx?direct=true&db=sih&an=9610084729.

Family Engagement/Commitment to Education: Low Contact With School

Another aspect of family engagement is the amount of contact parents or guardians have with the school about their child's academic progress or problems, academic program, or behavior problems. Two studies found a significant relationship between this type of family engagement and leaving school prior to graduation (1, 2).

Rumberger (2) in his analysis of data from 8^{-grade} students surveyed in the National Education Longitudinal Study (NELS), explored whether parent contact with their child's school or teacher about problems or attending events and having meetings with teachers or counselors would impact the likelihood that their child would drop out of school before graduating. He found that students whose parents had not contacted the school or teacher about their child's performance or behavior during their 8th-grade year, regardless of other family and personal characteristics like socioeconomic status (SES), were significantly more likely to drop out by the 10th grade as students whose parents had contacted the school or teachers about these issues. When he analyzed differences across race/ethnic groups, however, he found that these types of contacts only impacted dropout for White students and not Black or Hispanic students.

Jimerson and colleagues (1) followed an at-risk sample of youth from birth up to age 19 on a number of family and individual student achievement and problem behavior factors to assess the impact of early home environment, caregiving, and parent involvement at school on school dropout. The level of parent involvement was determined from teacher reports in 1st and 6s about how frequently parents had contacted the school or attended conferences. In analyzing various factors across students' school careers, the researchers found that parent involvement in the 6th grade was the most important predictor of dropping out by age 19.

Indicators

- Number of contacts between parents and school or teacher
- Number of parent-teacher conferences attended
- Teacher rating of level of parental involvement

Exemplary Programs That Address Risk Factor

AVID
Families & Schools Together
Fast Track

Project GRAD
Schools & Families Educating Children
Success for All
The Incredible Years

Bibliography

(1) Jimerson, S., Egeland, B., Sroufe, L. A., & Carlson, B. (2000). A prospective longitudinal study of high school dropouts examining multiple predictors across development. *Journal of School Psychology*, *38*(6), 525-549.

(2) Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.

Family Engagement/Commitment to Education: Lack of Conversations About School

Studies of two data sources explored the impact of parent-child conversations about school on dropout. Analyses explored whether parents talking with their children about what they studied at school, or discussions about courses or program selection, future educational planning, or school activities or events had any effect on whether or not a student graduated from high school.

Two studies were carried out on students surveyed in the National Education Longitudinal Study (NELS) (2, 3). Students were asked questions on the NELS questionnaire about the frequency of discussions with parents about school activities and educational plans (2). Eighth-grade students who had never had these types of discussions with their parents were significantly more likely to drop out than students who regularly had these discussions. Eighth-grade students whose parents never talked to them about high school plans were almost six times as likely to drop out as students who regularly had conversations with their parents about high school plans. But even students who only rarely had conversations about school activities or plans with their parents were only slightly more likely to drop out than students who had more frequent conversations with their parents about school, and the difference between them was not statistically significant.

From the NELS 8th-grade questionnaire, Teachman and his colleagues (3) developed a composite measure of parent-child interaction about school, based on both child and parent reports of how often during the school year they discussed school activities, courses, events, or what the child was studying at school. This measure was found to be significantly related to dropping out, regardless of parent education, income, or family structure.

The other study finding a significant link between parent-child school conversations and dropping out was from surveys of students participating in nationally funded dropout prevention programs (1). Sixth-grade students whose parents did not talk to them about things they were studying at school were more likely to drop out two to three years later than those who did discuss with parents what they were studying. Eleven percent of 6th-grade students who didn't talk with their parents about school studies dropped out, compared to 6 percent of the overall middle school sample. There was also a relationship found between discussions of studies and dropping out for high school students. Twenty percent of 9th-grade students who didn't talk with their parents about studies at school dropped out, compared to 15 percent of the overall high school sample.

Indicators

- Frequency of conversations between parents and child about what studying in school
- Frequency of conversations between parents and child about high-school planning

- Frequency of conversations between parents and child about postsecondary plans

Exemplary Programs That Address Risk Factor
Parenting Wisely

Bibliography

(1) Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.

(2) Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88.* Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

(3) Teachman, J. D., Paasch, K., & Carver, K. (1996, August). Social capital and dropping out of school early. *Journal of Marriage and the Family*, *58*(3), 773-783. Retrieved March 16, 2006, from http://sys.lib.clemson.edu:2048/login?url=http://sys.lib.clemson.edu:2609/login.aspx?direct=true&db=sih&an=9610084729.

References for Risk Factor Descriptions

Alexander, K. L., Entwisle, D. R., & Horsey, C. S. (1997, April). From first grade forward: Early foundations of high school dropout. *Sociology of Education*, *70*(2), 87-107.

Alexander, K. L., Entwisle, D. R., & Kabbani, N. S. (2001, October). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, *103*(5), 760-822.

Barro, S. M., & Kolstad, A. (1987, May). *Who drops out of high school? Findings from High School and Beyond*. Washington, DC: Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

Battin-Pearson, S., Newcomb, M. D., Abbott, R. D., Hill, K. G., Catalano, R. F., & Hawkins, J. D. (2000). Predictors of Early High School Dropout: A test of five theories. *Journal of Educational Psychology*, *92*(3), 568-582.

Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. *Child Development*, *60*, 1437-1452.

Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1986). Who drops out of high school and why? Findings of a national study. *Teachers College Record*, *87*(3), 3576-3730.

Elliott, D. S., & Voss, H. L. (1974). *Delinquency and Dropout*. Lexington, MA: Lexington Books, D. C. Heath and Company.

Ensminger, M. E., Lamkin, R. P., & Jacobson, N. (1996). School leaving: A longitudinal perspective including neighborhood effects. *Child Development*, *67*, 2400-2416.

Ensminger, M. E., & Slusarcick, A. L. (1992, April). Paths to high school graduation or dropout: A longitudinal study of a first-grade cohort. *Sociology of Education 65*, 95-113.

Gleason, P., & Dynarski M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, *7*(1), 25-41.

Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, *36*(4), 715-738.

Ingels, S. J., Curtin, T. R., Kaufman, P., Alt, M. N., & Chen, X. (2002, March). *Coming of age in the 1990s: The eighth-grade class of 1988 12 years later*. (NCES 2002-321). Washington, DC: National Center for Education Statistics, U. S. Department of Education.

Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. (1997). Disentangling the weight of school dropout predictors: A test on two longitudinal samples. *Journal of Youth and Adolescence*, *26*(6), 733-762.

Jimerson, S., Egeland, B., Sroufe, L. A., & Carlson, B. (2000). A prospective longitudinal study of high school dropouts examining multiple predictors across development. *Journal of School Psychology*, *38*(6), 525-549.

Jordan, W. J., Lara, J., & McPartland, J. M. (1994, August). *Exploring the complexity of early dropout causal structures*. Report No. 48, ERIC No. ED 375 227. Baltimore, MD: Center for Research on Effective Schooling for Disadvantaged Students, Johns Hopkins University.

Kaufman, P., Bradbury, D., & Owings, J. (1992, August). *Characteristics of at-risk students in the NELS:88*. Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education.

Lloyd, D. N. (1978, Winter). Prediction of school failure from third-grade data. *Educational and Psychological Measurement*, *38*(4), 1193-1200.

Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, *32*(3), 583-625.

Teachman, J. D., Paasch, K., & Carver, K. (1996, August). Social capital and dropping out of school early. *Journal of Marriage and the Family*, *58*(3), 773-783. Retrieved March 16, 2006, from http://sys.lib.clemson.edu:2048/login?url=http://sys.lib.clemson.edu:2609/login.aspx?direct=true&db=sih&an=9610084729.

Wagner, M., Blackorby, J., & Hebbeler, K. (1993, December). *Beyond the report card: The multiple dimensions of secondary school performance of students with disabilities. A report from the National Longitudinal Transition Study of Special Education Students.* Menlo Park, CA: SRI International for the Office of Special Education Programs, U.S. Department of Education. Available online at http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/24/5b/17.pdf.

Wehlage, G. G., & Rutter, R. A. (1986). Dropping out: How much do schools contribute to the problem? *Teachers College Record*, 87(3), 374-392.