

## 6. RELATIONSHIP OF FAMILY INVOLVEMENT TO STUDENT OUTCOMES

Families' support for their children's education is a significant contributor to a range of positive outcomes for students in the general population (Fan & Chen, 2001; Henderson & Berla, 1994; Henderson & Mapp, 2002; Jeynes, 2003). Students have benefited in multiple domains, including improvements in their academic self-confidence, attendance, homework completion, school behavior, academic performance, high school completion rates, and rates of postsecondary education enrollment (e.g., Eccles et al., 1988; Finn, 1998; Hoover-Dempsey et al., 2001; Keith et al., 1998; Thorkildsen & Stein, 1998).

Earlier chapters in this report focused on the extent to which families of students with disabilities are involved in their children's educational development. Although it is important to know the degree to which families participate and the relationships of student and family characteristics to levels of involvement, particularly for schools and programs focusing on supporting these types of activities, the bottom line is whether family involvement makes a difference in children's lives.

This chapter examines the relationships between levels of family involvement and student outcomes for students with disabilities.<sup>1</sup> It brings to bear information from previous NLTS2 analyses of student outcomes that span multiple domains, including school engagement, academic performance, social adjustment, and independence.<sup>2</sup> Multivariate analysis techniques (i.e., linear and logistic regression) were used to identify the independent relationships of various factors to these outcomes. Such analyses estimate the magnitude and direction of relationships for numerous explanatory factors, statistically holding constant other factors in the analysis.

This chapter comprises a discussion of the relationships of three aspects of family support— involvement at home, involvement at school, and family expectations—to differences in student outcomes across multiple domains. The chapter begins with a description of the independent variables included in multivariate analyses of student outcomes. It continues with a description of the relationships of family involvement with student outcomes in four domains:

- ◆ School engagement
- ◆ Academic performance
- ◆ Social adjustment
- ◆ Independence achievements.

### Independent Variables Included in Multivariate Analyses

Many of the factors associated with both family involvement and student outcomes are interrelated. For example, as described in Chapter 4, multiple student and family characteristics, such as students' having limitations in a greater number of functional domains, are associated with variations in levels of family involvement. Student outcomes also are related to multiple

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<sup>1</sup> This chapter describes the relationships of family involvement to student outcomes for youth with disabilities who were ages 13 through 17 at the time of the parent interview.

<sup>2</sup> These analyses are presented in *The Achievements of Youth with Disabilities During Secondary School* (Wagner, Cadwallader, & Marder, 2003).

student and family factors. For example, having more functional limitations is associated with being significantly more behind in reading and being less independent at home (Wagner, Marder, Blackorby, et al., 2003). For this chapter, a multivariate approach is used to hold other factors constant in an effort to disentangle complex relationships and identify the independent relationships between family support and student outcomes.

In exploring the relationships between family involvement and student achievements, multiple youth and family factors have been included in the multivariate analyses, including aspects of students' disability and functioning, their individual and household characteristics, their experiences related to school programs and performance, as well as three family involvement variables: involvement at home and at school, and family expectations (Exhibit 6-1). The family involvement variables are briefly described here; definitions of the other variables are presented in Appendix D.

As noted in Chapter 2, family involvement in education at home is assessed on a 4-point scale, which is the frequency with which parents report helping youth with homework and talking with youth. Summing responses to these items produces a scale that ranges from 0 to 8; the mean scale score is 6.8.

Family involvement at school, as described in Chapter 3, is assessed with a scale constructed by summing parents' reports (on a 4-point scale) of the frequency with which they did the following in the 2001-02 school year: "attend a general school meeting, for example, back to school night or meeting of a parent-teacher organization"; "attend a school or class event, such as a play, sports event, or science fair"; or "volunteer at school, for example, chaperoning a class field trip, or serving on a committee." The scale ranges from 0 to 12; the mean scale score is 3.3.

Parents' expectations that their adolescent children with disabilities will "attend school after high school" or "live away from home on his/her own without supervision" are reported on a 4-point scale: "definitely will," "probably will," "probably won't," and "definitely won't." These two items are used separately in the analyses (i.e., they are not summed). As noted in Chapter 5, expectations for youth are generally high. Overall, 62% of youth are expected "definitely" or "probably" to attend postsecondary school, and 85% are expected to live independently.

**Exhibit 6-1  
INDEPENDENT VARIABLES USED IN MULTIVARIATE ANALYSES OF STUDENT ACHIEVEMENTS**

| <b>Disability/Functioning</b> | <b>Individual and Household Characteristics</b> | <b>School Program/Performance</b>                      |
|-------------------------------|---|--|
| Disability category           | Age   | Percentage of classes in general education             |
| ADD/ADHD                      | Gender  | Enrollment in vocational education                     |
| Number of domains affected    | Race/ethnicity                                  | Number of social adjustment supports                   |
| Age at identification         | Uses language other than English                | Has a tutor  |
| Functional cognitive skills   | Household income                                | Number of instructional accommodations                 |
| Self-care skills              | Mobility  | Student absenteeism                                    |
| Social skills                 | Membership in school or community group         | In-class behaviors                                     |
| General health                | Family involvement at home                      | Student grades   |
| Persistence                   | Family involvement at school                    | Class size   |
|                               | Family expectations                             | Student no longer receiving special education services |
|                               |   | Ever retained at grade level                           |
|                               |   | Disciplinary actions                                   |

### **Relationship between Family Involvement and Student Achievements**

The findings presented in this section reinforce the importance of parents’ efforts in support of their children in multiple domains. Holding constant other individual, family, and school variables included in the multivariate analyses, higher levels of family involvement and expectations consistently are associated with more positive student outcomes in almost all domains.

#### ***School Engagement***

Multivariate analyses were performed to investigate the independent relationships of family involvement and expectations to school engagement. To measure students’ school engagement, teachers were asked to report how often youth take part in group discussions, complete homework on time, stay focused on classwork, and withdraw from social contact or class activities.

Teachers responded on a 4-point scale, ranging from “rarely” to “almost always.” To examine overall classroom behavior in each type of setting, the scale for “withdraw from social contact” was inverted, and then a scale was created by summing the ratings on the four behaviors. The scale ranges from 4 (all behaviors given the least positive rating) to 16 (all

behaviors given the most positive rating). Classroom engagement scales were created for general education academic classes, vocational education classes, and special education classes.

Families’ expectation that their adolescent children with disabilities will continue their education past high school is consistently related to classroom engagement across settings, (Exhibit 6-2).

- ❖ Students who are expected “definitely” to attend postsecondary school are more likely to receive higher classroom engagement ratings in the three types of classes than their peers who are not expected to continue their education, independent of differences in disability and other factors.
- ❖ Family involvement at home or at school is not related to engagement in general education or special education classes for students who take such classes, when controlling for other factors.
- ❖ Vocational education students whose families are more highly involved at home are more likely to be rated as engaged in vocational class activities than are those whose families are less involved at home.

**Exhibit 6-2**  
**DIFFERENCES IN SCHOOL ENGAGEMENT ASSOCIATED WITH**  
**LEVELS OF FAMILY INVOLVEMENT**

|  | Direction of Significant Difference in:                              |  |   |
|--|--|--|---|
|  | General Education<br>Academic Classroom<br>Engagement Scale<br>Score | Vocational Education<br>Classroom<br>Engagement Scale<br>Score | Special Education<br>Classroom<br>Behavior Scale<br>Score |
| Family involvement at home (high vs. low scale score)                                  |  | +*   |   |
| Family involvement at school (high vs. low scale score)                                |  |  |   |
| Family expectations (definitely will vs. definitely won't attend postsecondary school) | +***   | +***   | +***  |

Sources: NLTS2 Wave 1 parent interviews, student’s school program survey, and teacher survey.

Exhibit reads: The vocational education classroom engagement scale score is higher for youth whose families are more frequently involved at home than for those whose families are less frequently involved, all other variables being equal.

Statistics in this exhibit are calculated from models that included all the individual characteristics, household characteristics, and school program and performance characteristics in Exhibit 6-1.

+ higher; – lower

Blank cell = family involvement not significantly related to outcome.

\*p<.05; \*\*\*p<.001.

**Academic Performance**

To explore the independent associations between academic performance and family involvement and expectations, three multivariate models of academic performance were estimated. Dependent variables include grades<sup>3</sup> and reading and math performance. Grades are measured on a 9-point scale, ranging from “mostly As” and “mostly As and Bs” to “mostly Ds and Fs” and “mostly Fs.” “Reading performance” is tested reading performance on standardized

<sup>3</sup> Please see Appendix A for details on the measurement of students’ grades.

achievement tests compared with grade level; positive values indicate higher test scores relative to actual grade level, and negative values indicate lower test scores relative to actual grade level. “Math performance” is tested mathematics performance on standardized achievement tests compared with grade level; again, positive values indicate higher test scores relative to actual grade level, and negative values indicate lower test scores relative to actual grade level.

Family involvement at home and at school show different relationships, depending on the indicator of academic performance (Exhibit 6-3).

- ❖ Greater family involvement at home is related to youth’s receiving lower grades, perhaps reflecting the tendency of parents to provide homework help to lower-performing students.
- ❖ Youth whose families are involved more at school are more likely to receive higher grades and are closer to their measured grade level in reading, controlling for other factors.

Parents’ expectations for the academic futures of their children with disabilities also are consistently related to academic performance.

- ❖ Students with disabilities whose parents have higher expectations for postsecondary education are more likely to receive higher grades and have reading and mathematics test scores that are a year closer to grade level than youth whose parents have lower postsecondary education expectations, independent of other disability, demographic, or school program factors included in the analyses.

**Exhibit 6-3**  
**DIFFERENCES IN ACADEMIC PERFORMANCE ASSOCIATED WITH**  
**LEVELS OF FAMILY INVOLVEMENT**

|  | Direction of Significant Difference in: |   |  |
|--|---|---|--|
|  | Grades                                  | Tested Reading<br>Performance<br>Compared with Grade<br>Level | Tested Mathematics<br>Performance Compared<br>with Grade Level |
| Family involvement at home (high vs. low scale score)                                  | -**                                     |   |  |
| Family involvement at school (high vs. low scale score)                                | +**                                     | +**   |  |
| Family expectations (definitely will vs. definitely won’t attend postsecondary school) | +***                                    | +***  | +***   |

Sources: NLTS2 Wave 1 family interviews and student’s school program survey.

Exhibit reads: In a school year, the grades of youth whose parents are more frequently involved at home are lower than those of students whose parents are less frequently involved, all other variables being equal.

Statistics in this exhibit are calculated from models that included all the individual characteristics, household characteristics, and school program and performance characteristics in Exhibit 6-1.

+ higher; – lower

Blank cell = family involvement not found to be significantly related to outcome.

\*\*p<.01; \*\*\*p<.001.

## Social Adjustment

Four indicators of social adjustment are included in the multivariate analyses: two indicators of positive social adjustment—seeing friends at least weekly and belonging to groups—and two indicators of negative social adjustment—disciplinary actions at school and arrests. To understand the out-of-school social activities of youth with disabilities, parents were asked whether their sons or daughters belong to any type of organized group and how often they see friends outside of school and organized groups. To assess negative behaviors, parents were asked whether their son or daughter had ever been arrested. School staff were asked whether youth had been suspended, expelled, or involved in any other type of disciplinary action, such as a referral to the office or detention, during the current school year.

- ❖ Family involvement at home is not related to social adjustment outcomes, independent of other factors (Exhibit 6-4).
- ❖ Family involvement at school is associated positively with both measures of social integration—seeing friends and belonging to groups—with a particularly strong relationship to the likelihood of youth’s belonging to groups, many of which are school based.
- ❖ Youth whose families expect them to go to college are more likely to belong to groups and to see friends informally at least weekly.
- ❖ Independent of other factors, students whose families expect them to go to college are less likely to be subject to disciplinary actions at school (i.e., being suspended, expelled, or referred to the office, or receiving detention).
- ❖ Neither family involvement nor expectations are related to arrests, when controlling for other factors.

**Exhibit 6-4**  
**DIFFERENCES IN SOCIAL ADJUSTMENT ASSOCIATED WITH LEVELS OF FAMILY INVOLVEMENT**

|  | Direction of Significant Difference in: |  |   |                      |
|--|---|--|---|----------------------|
|  | Belonging to a Group                    | Seeing Friends Outside of Groups at Least Weekly | Receiving Disciplinary Action at School | Having Been Arrested |
| Family involvement at home (high vs. low scale score)                                  |   |  |   |                      |
| Family involvement at school (high vs. low scale score)                                | +***                                    | +**  |   |                      |
| Family expectations (definitely will vs. definitely won't attend postsecondary school) | +*                                      | +*   | -*                                      |                      |

Sources: NLTS2 Wave 1 family interviews and student’s school program survey.

Exhibit reads: The probability of belonging to a group is higher for youth whose family is more frequently involved at school than for youth whose family is less frequently involved at school, all other variables being equal.

Statistics in this exhibit are calculated from models that included all the individual characteristics, household characteristics, and school program and performance characteristics in Exhibit 6-1.

+ higher; – lower

Blank cell = family involvement not significantly related to outcome.

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

## Independence

Multivariate analyses were performed to investigate the independent relationships of family involvement and expectations to emerging independence. Two measures of independence were used: independent performance of household chores and regular paid employment outside of school. Parents were asked how often youth fix their own breakfast or lunch, straighten up their living space, do laundry, and buy a few things at a store when they are needed. The frequency of performing these tasks was reported on a 4-point scale, ranging from “never” to “always.” To examine an overview of students’ household responsibilities, a scale was created by summing the ratings of the frequency with which youth do the four activities. The scale ranges from 4 (all activities “never” done) to 16 (all activities “always” done). Parents also were asked whether their sons or daughters were employed in regular paid jobs outside the home (other than work-study) at some time in a 1-year period.

- ❖ Family involvement in their children’s education at home is not related to youth’s being more or less involved in household responsibilities, such as making breakfast, cleaning up, or doing laundry, independent of other student, family, and school factors.
- ❖ Youth with disabilities whose families are more involved in their schools are more likely to have been employed in the preceding year, when other student, family and school factors are held constant.
- ❖ Youth whose families expect that they will eventually live away from home without supervision are more likely to perform household tasks.

### Exhibit 6-5 DIFFERENCES IN INDEPENDENCE ASSOCIATED WITH LEVELS OF FAMILY INVOLVEMENT

|  | Direction of Significant Difference in:   |  |
|--|---|--|
|  | Household Responsibilities<br>Scale Score | Probability of Having Regular<br>Paid Employment |
| Family involvement at home (high vs. low scale score)                        |   | NA   |
| Family involvement at school (high vs. low scale score)                      | NA  | +***   |
| Family expectation (definitely will vs. definitely won’t live independently) | +***                                      | NA   |

Source: NLTS2 Wave 1 family interviews.

Exhibit reads: The household responsibilities scale scores of youth whose parents expect them definitely to live independently is higher than the score of those expect them probably not to live independently.

Statistics in this exhibit are calculated from models that included all the individual characteristics, household characteristics, and school program and performance characteristics in Exhibit 6-1.

+ higher; – lower. NA = not included in analysis.

Blank cell = family support not significantly related to outcome.

\*\*\*p<.001.

## Summary

The importance of family involvement and expectations is supported by NLTS2 analyses. Parents' support of their children's education, as demonstrated by such activities as attending school meetings or classroom events or volunteering at school, is associated with consistent differences in several achievement domains, independent of disability, functioning, or other differences among youth.

- ◆ Youth whose families are more involved in their schools are less far behind grade level in reading, tend to receive better grades, and have higher rates of involvement in organized groups (many of which are school based) and with individual friendships than youth with less family involvement at school.
- ◆ In the independence domain, youth whose families are more involved in their schools are more likely than youth from less-involved families to have had regular paid jobs in the preceding year.

This pattern of relationships suggests that families may demonstrate similar levels of active involvement in support of their children both at school and in pursuing extracurricular activities, getting together with friends, and holding jobs.

In contrast, family support for education at home (i.e., talking regularly about school and helping with homework, providing a computer for schoolwork) is not related to many outcomes, controlling for other differences among youth. One exception:

- ◆ Greater support for education at home is negatively associated with grades, possibly because parents are more likely to provide homework help to students who are doing poorly in school.

Expectations that parents hold for the futures of their children with disabilities in part reflect parents' experience with and perceptions of the ways those disabilities are thought to limit activities and accomplishments. However, NLTS2 findings suggest that family expectations for the future also help shape the achievements of youth with disabilities, irrespective of the nature of the youth's disabilities and their levels of functioning, particularly with regard to academic engagement and achievement. Other things being equal, youth with disabilities whose parents expect them to go on to postsecondary education after high school have more positive engagement and achievements while in high school than youth whose parents do not share that optimism for the future.

When holding disability, functioning, or other differences among youth constant, youth with disabilities whose parents expect them to go on to postsecondary education are more likely to:

- ◆ Have positive classroom engagement behaviors in all settings and receive better grades than youth who are not expected to continue their education.
- ◆ Be closer to grade level in their tested reading and math abilities than youth who are not expected to further their education after high school.
- ◆ Avoid disciplinary actions and affiliate with organized groups, many of which may be sponsored by or meet at school.

In the independence domain, when controlling for other differences, youth with disabilities whose parents have high expectations that they will live independently in the future are more likely to:

- ◆ Assume household responsibilities while in high school than are those who are not expected to live independently.

This chapter has examined the relationships of family involvement and expectations to various outcomes for youth with disabilities, including students' school engagement, academic performance, social adjustment, and independence. Chapter 7 presents key themes from the analyses documented in this report.