

Parental Involvement as a Mediator of Academic Performance Among Special Education Middle School Students

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Abstract

This study examined parental involvement as a mediator of the academic performance of middle school students with special needs. The study built on the different types of parental involvement theorized by Epstein and colleagues (2002) and studied empirically by Fan and Chen (2001). Using a specially developed questionnaire, a sample of 82 parents (representing all children enrolled in a special education program in a charter middle school in a diverse, urban environment) reported on the nature and extent of their involvement in their children's schoolwork. These ratings were then compared with their children's actual grades in four core classes over the course of the academic year. Echoing earlier findings with general population students, a significant relationship was found between parental expectations and overall GPA. Since Resource Room students had significantly lower grades than Special Day students (those in a self-contained, noninclusive classroom), parental communication and general involvement were negatively associated with academic performance in this sample, as had been the case earlier with similar groups of struggling students. Findings revealed a more complex relationship between parental involvement and academic achievement for special education students. These outcomes suggest that parental involvement with other student groups, grade levels, disabilities, and strengths may also be associated differently with other aspects of parental involvement and merit further study.

Key Words: special education, middle school students with disabilities, parental involvement, expectations, inclusion, Resource Room, Special Day classroom

Introduction

It has long been assumed by parents, teachers, administrators, and the general public that parental involvement with children's educational experiences is an indispensable component of children's academic success (Paratore, Melzi, & Krol-Sinclair, 1999). The inverse has also often been assumed to be equally true: that a lack of parental involvement may be at the root of school difficulties for some students (Barnard, 2004). However laudable these sentiments have been, empirical research on the nature and actual effectiveness of this involvement has been catching up to the enthusiasm generated by the early theorists. This study followed the empirical work of Fan and Chen (2001) and Jeynes (2005) conducted with mainstream students by examining the direct relationship between parental ratings of involvement in their children's schoolwork with those children's class grades in a sample of middle school special education students—a population group that has received scant empirical analysis of this sort.

Parental Involvement

The role that parental involvement plays in the academic performance of children has been a subject of keen interest to educators for at least the past four decades (Bower & Griffin, 2011). As is usually the case in the social sciences and education literature, this interest first manifested itself in the work of theorists (e.g., Epstein et al., 2009), which then sparked the work of researchers (Jeynes, 2011a). The early theoretical call for action and further study was epitomized by the work of Epstein and her colleagues (2009). The Epstein model emphasized six specific types of behaviors on the part of families that were assumed to promote children's achievement in school: (a) positive conditions in the home, (b) communication between parents and children about schoolwork, (c) parental involvement in school, (d) learning activities in the home, (e) shared decision making with the school, and (f) community partnerships between parents and school personnel (Epstein et al., 2009).

Although there was some discourse and disagreement among theorists as to what constituted the essential components of parental involvement, educators came to some consensus that these activities included actions that parents took on behalf of their children both at home and at school, for example, helping with homework, structuring children's time at home for schoolwork, communicating with teachers, and volunteering at school (Bower & Griffin, 2011).

Some scholars cautioned that while this traditional understanding of parental involvement garnered general support, it generated expectations that parents would devote their time and effort to their children's academic performance while not making comparable demands on the school to reach out to parents, especially those of lower socioeconomic status and from limited English speaking backgrounds (Desimone, 1999; Griffin, 2011; Jeynes, 2003). Despite some criticism that the Epstein model conceptualizes parental involvement on the schools' rather than the families' terms, Epstein et al. (2009) stressed the responsibility of school personnel for initiating contacts with parents in order to further the educational success of all students.

Along with laying the theoretical foundation for work in this area, some studies have shown modest demonstrations of the Epstein model's effectiveness in promoting some aspects of academic performance among students in minority communities (Barnard, 2004). For example, in their study of an early intervention program of parental involvement with disadvantaged children, Miedel and Reynolds (1999) found that the number of activities in which parents participated in preschool and kindergarten was significantly associated with higher reading achievement, lower rates of grade retention at age 14 (eighth grade), and fewer years in special education.

Empirical Research

The past 10–15 years have shown a move toward empirical examinations of the intuitive relationship between parental involvement and student achievement (Jeynes, 2011b). While empirical findings have increasingly begun to articulate the nature and extent of this relationship, the findings have been less than fully consistent, and the subject has proven to be more complex and multidimensional than the initial academic zeal anticipated. The first generation of studies on this subject tended to use global, generalized measures of parental involvement as defined principally by teachers, and its empirical relationship to academic achievement was modest (Hong & Ho, 2005).

The empirical branch of work in this area was summarized first by the meta-analytic work conducted by Fan and Chen (2001). These researchers canvassed the field and noted the scarcity of empirical studies on parental involvement. The vast literature they reviewed consisted mainly of theoretical pieces emphasizing its importance and calling for interventions on the part of schools, even before a clear understanding of the empirical nature of this relationship had been established. Fan and Chen (2001) yielded an important benchmark for empirical work in this area and established an operational definition of parental involvement, generated on an empirical basis, which was entirely consonant with the theoretical work of Epstein and her colleagues.

Fan and Chen (2001) concluded that earlier work established the following five dimensions of parental involvement as encompassing the key parental behaviors influencing student performance: (a) educational expectations/aspirations for children, (b) communication with children about school-related matters, (c) parental supervision/home structure related to school matters, (d) parental participation in school activities, and (e) other/general parental involvement behaviors. The most frequently studied indicators of academic achievement among mainstream students have been overall GPA and class and standardized test scores in mathematics and reading (Fan & Chen, 2001; Jeynes, 2003).

Building on the earlier work of Fan and Chen (2001) and also using meta-analytic techniques, Jeynes (2010) established that parental involvement is considerably broader and more complicated than early theorists had anticipated. Perhaps foremost in importance and implication was his finding that “subtle aspects” (Jeynes, 2010, p. 751) of parental involvement were more salient and impactful than overt expressions of that involvement. Specifically, Jeynes (2010) found that high expectations, communication between parents and children, and parenting style (emphasizing strong love and support with a beneficial degree of discipline and structure) were especially important in impacting children’s academic performance. This finding was surprising to those who expected that the more concrete and overt aspects of parental involvement would be more influential, for example, checking homework, parental participation in school activities, and so on. It would appear, according to meta-analysis of the research literature, that parental involvement affects children positively not so much by direct skill building, but by a more covert impact on their attitudes, self-concept, and motivations related to school.

Special Education Focus

The empirical work on parental involvement and children’s academic performance has been largely founded on the experience of mainstream students and their parents (Henderson & Mapp, 2002, Jeynes, 2011a). In his invited guest editorial, Jeynes (2011a) called for more varied and expansive work in the field of parental involvement and student achievement, both empirical and theoretical, in order to reach a better understanding of the interrelationship between these variables. For example, McDonnall, Cavanaugh, and Giesen (2012) found that parental involvement was positively related to the mathematics performance of students with visual impairments. Once again, more subtle aspects of this involvement that influenced attitudes toward schoolwork were found to be more influential than overt skill building on the part of parents.

Another rational and clear direction this research can take is with the population of special education students. The current study sought to advance empirical work in this area by using a multidimensional definition of parental involvement as reported by parents directly, based on the meta-analytic work of both Fan and Chen (2001) and Jeynes (2010), and to extend this work to the population of special education students.

In approaching this extension of parental involvement research, it is important to be mindful of the fact that there are different levels of special education placement (Idol, 2006). Since 1989 there has been an increase in the number of students with specific learning disabilities being educated in general education classrooms, while the percentage of special education students receiving instruction in Resource Rooms or Special Day Classrooms has decreased. This is due principally to the policy of the Least Restrictive Environment (LRE) requiring:

...that to the maximum extent appropriate, students with special needs are educated with typical peers. In accordance with LRE, the IEP [Individualized Educational Program] team considers the placement of a student with special needs in an educational program that promotes maximum interaction with typical peers in a manner beneficial to the student with special needs and the students in the general education environment. (Santiago Charter Middle School, 2013, p. 10)

The Education for All Handicapped Children Act (1975) mandated that all handicapped children be educated in the LRE to the maximum extent possible. Because of this mandate, mildly handicapped children are placed in general education classes to a degree determined by the Individualized Educational Program (IEP) team and stated in the child's IEP (Jung, 2011). Under this system, they spend a portion of their school day in a separate special education program (i.e., Resource Room). Children with more severe disabilities who have added specific needs requiring a more restrictive environment are placed in all-day special education classrooms, such as a Special Day Class (Idol, 2006). While it is not clear that such distinction consistently results in statistically significant, better performance, the special education field has generally followed this model of placing children in the LRE (Affleck, Made, Adams, & Lowenbraun, 1988; Fore, Hagan-Burke, Burke, Boon, & Smith, 2008).

The current study sought to extend empirical work on the relationship between parental involvement and student achievement to the population of special education students in an urban, low socioeconomic status, ethnically diverse, middle school environment.

Method

Setting

The current study was conducted during the 2012–2013 academic year in a middle school of the Orange Unified School District, Santiago Charter Middle School, with the permission of the school's administration in accordance with their Institutional Research Board (IRB); this included permission to use the school name in study-related publications. This is a seventh and eighth grade middle school set in an urban environment with an ethnically and economically diverse population. As required by state law, the school offers a special education program, defined as:

Specially designed instruction developed to meet the unique needs of a child with a disability whose educational needs cannot be met without significant moderation to the general instructional program. Disabilities include: mental retardation, speech and language impairment, orthopedic impairment, specific learning disability, autism, hard of hearing, visual impairment, other health impairment, deaf-blindness, traumatic brain injury, deafness, emotional disturbance, established medical disability, multiple disability. (Santiago Charter Middle School, 2013, p. 12)

Santiago Charter Middle School, as with all publicly funded schools, is also required by law to have a LRE program for special education students, meaning “to the maximum extent appropriate, students with special needs are educated with typical peers” (Santiago Charter Middle School, 2013, p. 10).

An IEP is a legally mandated plan for each student with a disability that is developed, reviewed, and revised in accordance with the requirements of federal and state special education law (Jung, 2011). Teachers and professionals in education use the results of the IEP process to make sure the child is making progress toward and reaching his/her specified goals. It maximizes the percentage of time that special education students spend in general education classes and otherwise assigns them to whatever special education program for which they qualify. For the purposes of this study, data from each child's IEP were gathered anonymously with the consent of parents.

Special Day Classroom

There is no universally accepted and applied definition for the term Special Day Classroom, but several terms are generally considered to be synonymous with it, such as *noninclusive classroom* or *self-contained classroom*. Jones and Hensley (2012) define a self-contained classroom as: “the situation in which a child spends at least half of his/her school day in special education” (p. 35). The child's IEP indicates how much time that child spends in special education and general education.

Resource Room

Idol (2006) defines a Resource Room as “any setting in the school to which students come to receive specific instruction on a regularly scheduled basis, while receiving the majority of their education elsewhere (usually in the general education program)” (p. 12). Resource Rooms do not refer to classes where students with disabilities are mainstreamed only during certain times of the day, such as lunch, gym, or art. They are also not consultative programs where students with disabilities remain full-time in a general education classroom setting, where modifications can be made for the student in instruction. The Resource Room program’s purpose is to ensure that it truly supports the general education program and is likely to support the students transferring what they have learned in the Resource Room to learning in the general education classroom (Idol, 2006).

Participants

Students

Participant students in this study included seventh and eighth grade special education students enrolled at Santiago Charter Middle School during the 2012–2013 academic year ($N = 82$, from a total enrollment of approximately 1,000 seventh and eighth grade students at the school). Parents provided written consent to use data from their children’s cumulative folder anonymously for the purposes of establishing group norms only. Participant students had been assigned to either the Special Day Classes or Resource Rooms following the assessment process detailed in their IEP. Students in these programs had been diagnosed with a number of learning-related disabilities.

The students’ trimester grades for the year in each of four core academic classes (English, Mathematics, History, Science) were used as the dependent variables for this study. These data were taken directly from their cumulative folders. The students’ achievement and abilities data were also used to examine whether any relationship existed between self-report of parental involvement and their basic academic capabilities as measured by the Brigance, Woodcock-Johnson, and Wechsler tests (described subsequently). The Brigance is differentiated from their academic performance, which was reflected in their grades on the four core classes noted previously. The students’ academic capabilities and achievement were reflected in their scores on the following tests:

- ***Brigance Comprehensive Inventory of Basic Skills II (CIBS-II)***. The CIBS-II measures academic achievement in reading, writing, and math. These assessments are done using measures such as word recognition, reading vocabulary comprehension, comprehension of passages, computational

skills, and sentence writing. The inventory is standardized for use with grade levels PreK–9 with scores represented by a mean of 100 and a standard deviation of 15 (Brigance, 2010).

- *Woodcock-Johnson III Normative Update Technical Manual (WJ-III)*. The WJ-III is a standardized achievement test that measures general intellectual ability, specific cognitive abilities, scholastic aptitude, oral language, and academic achievement. It is a comprehensive, norm-referenced, individual test designed for use with individuals of ages 2–90+ (McGrew, Woodcock, & Schrank, 2007).
- *Wechsler Intelligence Scale for Children IV (WISC-IV)*. The WISC-IV is an individually administered test that provides IQ scores for children as well as clinical insight into the child's cognitive functioning. It is designed for individuals aged 6–16 years old and yields scores in five subgroups: verbal IQ, performance IQ, full scale IQ, working memory, and processing speed (Wechsler, 2003).

Students' demographic and academic achievement data were recorded from their cumulative files with the written, informed consent of their parents. The coding sheet developed to gather this information is available from the authors upon request. Demographic data used for the purposes of this study included the students' gender; grade level; Resource Room or Special Day Class assignment; percentage of time spent in special education; specific disability; standardized academic achievement data; and trimester grades in their English, Math, History, and Science classes over the course of the 2012–2013 academic year. For statistical purposes, the students' trimester grades were converted from a letter to a number-based metric on a 4.0 grade scale (A = 4.0, A- = 3.7, B+ = 3.3, B = 3.0, etc.).

Parents

The parents of these middle school students were asked to complete a self-report questionnaire that quantified their involvement in their children's education along the five dimensions of parental involvement identified in the work of Fan and Chen (2001) and Jeynes (2010). This questionnaire was developed expressly for the purposes of this study and is included in Appendix A. The parents were told that the study was being conducted by the Special Education Department as a whole at Santiago Charter Middle School. No individuals were identified as being the investigators so as to reduce any bias (positive or negative) that might have resulted from the questionnaire being associated with any given person(s).

Four items were developed on a rational basis for each of the five dimensions of parental involvement. Involvement statements were evaluated on a

4-point Likert-type scale: strongly agree, agree, disagree, and strongly disagree. This scale was based upon the parental involvement dimensions that Fan and Chen (2001) identified in their meta-analysis, consisting of four items for each dimension.

Specifically, the parents were asked to complete an English or Spanish version (their choice) of the questionnaire using a 4-point Likert-type scale consisting of four items/questions on each of the following dimensions: (a) educational expectations/aspirations for children (e.g., I am confident that my child will fulfill the goals stated in his/her IEP), (b) communication with children about school-related matters (e.g., I talk to my child about problems she/he may have in school), (c) parental supervision/home structure related to school matters (e.g., I make sure my child has an area in the house just for doing homework), (d) parental participation in school activities (e.g., I attend all of my child's IEP Meetings), and (e) other/general parental involvement (e.g., I often search for more information on helping my child succeed).

The parents' scores on the Parent Questionnaire were paired with their child's academic performance using a numbering system that ensured each set of parents' ratings were examined along with their children's academic performance data. This system preserved the anonymity of everyone involved. The parents' possible scores ranged from 4–16 on each dimension and from 20–80 for a Total Parental Involvement Score (the sum of the five dimensions).

Teachers

In an attempt to control for the possible social desirability response set of parents, the Special Day Class and Resource Room teachers also completed a parent involvement scale that corresponded with the dimensions of the questionnaire given to the parents (Appendix B). Their questionnaire measured the degree of parental involvement they perceived on the parents' part and mirrored the categories of parental participation identified by Fan and Chen (2001). The teachers evaluated the parents' participation with their children's educational efforts from their own perspective.

Procedure

Parents were contacted about participation through letters sent home from school with their children early in the second trimester. Each information packet included a letter describing the study, a permission form to anonymously use information from their children's cumulative files, and the Parent Questionnaire (in an English and Spanish version). Parents were asked individually to come to the school site and complete a permission slip allowing this study to take place and to complete the questionnaire in regard to the level of parental involvement in which they engage. The researchers collected the forms

from each parent for analysis before the data were gathered from the students' cumulative folder. Out of 84 total parents, 82 (a nearly 98% response rate) completed the questionnaire and gave their consent to use their child's data anonymously for group comparison purposes.

This study was reviewed and approved by the Institutional Review Boards of each of the first two senior authors' affiliated universities before the data were collected. As the data were taken from the cumulative folders, they were put into an Excel spread sheet. Each of the 82 subjects comprised a single row on the Excel spread sheet, and all the dependent variables from the coding sheet, the cumulative folder, and the corresponding parent and teacher data for that student made up the columns. The raw data were loaded onto a STATA program where they were summarized and analyzed. The Excel and STATA data sets are and will be kept in the principal's office at Santiago Charter Middle School site in a locked file cabinet in an alarmed building. These data will be kept for seven years and then destroyed.

Results

Descriptive Statistics

The data set was first analyzed to provide descriptive statistics for the students and parents making up this sample. Table 1 describes the sample characteristics along the dimensions of gender (male or female), grade level (seventh or eighth grade), and special education status (Resource Room or Special Day Class).

Table 1. Descriptive Statistics by Learning Environment

	Special Day Class	Resource Room
	(<i>n</i> = 33)	(<i>n</i> = 49)
Males	24	28
Females	9	20
Seventh Graders	18	22
Eighth Graders	15	27

Note. *N* = 82

In keeping with previously established norms evident nationwide, males outnumbered females in this study's sample of special education students. This disparity (52 versus 29) was especially noticeable in the Special Day Class where males outnumbered females 24 to 9. The disparity in Resource Room placement was not as severe, as males outnumbered females 28 to 20.

Table 2. Diagnosed Student Impairment

Impairment	<i>n</i>
Speech/Language	9
Other Health Impaired	18
Emotionally Disturbed	3
Hard of Hearing	1
Intellectual Disability	4
Autism	12
Behavior Support Plan	7
ADHD	12
Social Issues	1
Asperger's Syndrome	3
Depression	1
Disruptive Behavior Disorder	1

Note. *N* = 82. *n* = number diagnosed with each impairment

Table 3. Average Academic Performance by Class Designation

	Special Day Class (<i>n</i> = 33) <i>M</i> (<i>SD</i>)	Resource Room (<i>n</i> = 49) <i>M</i> (<i>SD</i>)
Trimester 1 English GPA	3.14 (0.79)	2.09 (0.89)
Trimester 1 Math GPA	3.06 (0.87)	2.40 (0.95)
Trimester 1 Science GPA	3.05 (0.79)	2.40 (0.99)
Trimester 1 History GPA	3.48 (0.65)	2.43 (1.05)
Trimester 2 English GPA	2.96 (0.71)	2.02 (0.86)
Trimester 2 Math GPA	2.83 (0.75)	2.23 (1.01)
Trimester 2 Science GPA	3.04 (0.61)	2.58 (0.97)
Trimester 2 History GPA	3.34 (0.67)	2.29 (1.07)
Trimester 3 English GPA	3.02 (0.61)	1.96 (0.97)
Trimester 3 Math GPA	3.35 (0.60)	2.55 (1.09)
Trimester 3 Science GPA	3.24 (0.47)	2.38 (0.97)
Trimester 3 History GPA	3.23 (0.69)	2.51 (1.35)
Total English GPA	3.01 (0.69)	1.99 (0.81)
Total Math GPA	3.03 (0.72)	2.34 (0.84)
Total Science GPA	3.04 (0.64)	2.42 (0.91)
Total History GPA	3.31 (0.58)	2.40 (0.87)
Total GPA	3.12 (0.49)	2.29 (0.70)

Note. *N* = 82

Student disability designations are presented in Table 2. The most numerous designations included Autism ($n = 12$) and Other Health Designation ($n = 18$). The remaining participants in the study dispersed broadly across several special education designations. The student participants were further described statistically by calculating their class grades across trimesters for English, Mathematics, History, and Science classes, as these were considered core indicators of their academic performances. Class grades are presented for each trimester and overall Grade Point Average (GPA, see Table 3).

As expected, students in Resource Rooms had significantly lower GPAs across each class and Overall GPA. This was anticipated to be the case because these students spend at least some portion of their day in mainstream classes, where the subject matter is more challenging for special education students and where they compete against mainstream students in a more stringent grading environment. Students in the Special Day Class spend the entirety of their school day in special education instruction, where grading takes their status into account and grades are based on special education norms.

The average ratings of parents across the five dimensions of parental involvement were calculated and are presented in Table 4. In general, parents rated themselves as being quite involved in their children's educational work with a Total Parental Involvement mean of 3.09 (out of 4) on the four questions making up each of the dimensions. There was variance to the degree of this involvement, with Parental Expectations being highest ($M = 3.62$) and General Involvement being lowest ($M = 1.62$).

Table 4. Dimensions of Parental Involvement

	<i>M</i>	<i>SD</i>
Parental Expectations	3.62	.66
Parental Communication	3.55	.55
Parental Supervision	3.45	.46
Parental Participation	3.24	.52
Parental General Involvement	1.60	.57
Total Involvement	3.09	.27

Note. $N = 82$

The central analyses for this study concerned the relationship between parental involvement and academic achievement. For those purposes, a step-wise Regression Analysis was conducted, and the results are included in Table 5.

Table 5. Association Between Parental Involvement and GPA

	Total GPA
	β (SE)
Parental Expectations	.28 (.15)*
Parental Communication	-.46 (.22)**
Parental Supervision	.15 (.22)
Parental Participation	.01 (.17)
Parental Involvement General	-.36 (.22)*
Resource Room	-.52 (.14)**

Note. * $p < .05$, ** $p < .01$. Resource Room is a comparison of GPA between students designated as Special Day Class and those designated as Resource Room.

Beta statistics revealed significant relationships between several dimensions of parental involvement and total GPA for the entire sample of special education students. Specifically, Parental Expectations positively regressed (i.e., were predictive of) the overall GPA, at a .05 level of significance. The following dimensions of parental involvement negatively regressed the overall GPA: Parental Communication and Parental Involvement General, at the .01 level of significance.

No significant relationships were found between any of the dimensions of parental involvement and grades in specific academic classes, that is, English, Mathematics, History, and Science. Similarly, no significant differential relationships were found between parental involvement and the academic performance of male and female students or seventh and eighth grade students. A statistically significant, negative regression was found between Resource Room status and GPA.

Teacher and parent ratings of parental involvement were not significantly correlated with each other, and moreover, teacher ratings of parental involvement were not found to be associated with student achievement. Those results are not reported in tabular form in the interest of brevity. Those data suggest that, in light of the relationship found between parental self-ratings of involvement and their students' performance, the teachers' necessarily limited awareness of the parents' involvement with their children's education was not robust enough to correlate significantly with student performance. Teachers do not ordinarily see parents and children interacting in the home or even in all their dealings with the school; therefore, it is not surprising that their perceptions did not turn out to be as meaningful as those of parents.

The strong, negative regression relationship between Resource Room membership and total GPA is the underlying determinant of the negative regression relationship between the two factors of parental involvement and GPA noted

previously. As stated, Resource Room membership was associated with a significantly lower overall GPA relative to the Special Day Class. Resource Room students' grades in the core classes were determined in direct competition with general education students, in whose classes they were mostly enrolled. Because of this, they had lower grades across classes and trimesters relative to the Special Day Class students whose grades were determined relative only to other special education students in whose classes they spent the entirety of their day. As the students' grades were lower, their parents reported higher levels of involvement. This effect was so strong among Resource Room students that the entirety of the sample (Resource Room and Special Day students) showed a negative regression relationship between these two dimensions of parental involvement and academic performance, which will be discussed below.

Summary and Discussion

The current study extends empirical work on parental involvement to a heretofore neglected population—special education middle school students from an ethnically and economically diverse urban environment.

“Soft” Findings

This study's findings were subdivided into “soft” empirical and observational findings and “hard,” more purely empirical results. The first of the “soft” findings was the sheer percentage of parents consenting to agree to the anonymous use of their children's transcript and report card data. As noted earlier, nearly 98% (82 out of 84) of the parents of special education students in the school under investigation consented to having their children's data used anonymously. That such a high percentage would be willing to be involved in their children's educational endeavors is an indication of their genuine interest in their children's education, especially when one considers that the socioeconomic status and educational level of Santiago Charter School parents is relatively low (a segment of the population generally considered to have less direct involvement in their children's education). Perhaps the school being a charter contributed to this extremely high degree of participation. Enrollment at Santiago Charter Middle School is not limited to the immediate neighborhood, and parents from different parts of the county enrolled their children there, to varying percentages across the years.

Their rate of participation reveals a willingness of the parents to be involved in their children's educational process and likely a positive regard for the programs in which their children are enrolled. This rate of involvement corroborates the self-ratings of involvement they reported subjectively in their

responses to the Parent Involvement Questionnaire they were asked to complete (see Table 4).

Parents described themselves as being quite involved in their children's educational pursuits. In particular, they reported a high degree of expectations for their children's success, communication with their children about school-related matters, supervision of their school activities, and parental participation in their school-related activities. Only general aspects of parental involvement (e.g., I often search for more information on helping my child succeed; I know how to help my child learn) failed to gain agreement from parents as something they do routinely.

To varying degrees, special education students enrolled in the Resource Room program achieved statistically lower grades in their core classes of English, Math, History, and Science than their counterparts in Special Day Classes. This finding was anticipated and is in keeping with general findings across settings. Resource Room participants are subject to general education standards of grading and completion, which are likely to be higher than those found in Special Day Classrooms. This pattern of findings helped establish the representativeness of this sample as one that performed in keeping with general findings across special education groups.

“Hard” Findings

In keeping with earlier work in this area (Fan & Chen, 2001), significant empirical relationships were found between a number of dimensions of parental involvement and student achievement with this population of special education middle school students: some positive (Parental Expectations), and some negative (Parental Communication, Parental Involvement General). This finding represents a more nuanced understanding along the lines called for by Jeynes (2011b) when he noted the need to appreciate the more complex nature of parental involvement and its relationship to student academic performance.

In particular, a positive relationship between Parental Expectations and overall student achievement was found ($\beta = .28$). This meant that, by whatever implicit means, the expectations of success parents held for their children were associated with actual higher achievement as measured by overall GPA across three trimesters of a single school year. This psychological variable, then, as it had with mainstream students, was associated with higher academic performance for these special education students. This finding mirrors those of Fan and Chen (2001) as well as those of Jeynes (2010), who similarly found that the more covert expectations of parents, rather than their overt involvement in skill-building (i.e., checking homework, structuring space in their house for completing schoolwork, etc.) seem to be most significantly associated with success in academic performance.

A number of other significant relationships were found in which some aspects of parental involvement were associated negatively with academic performance, that is, Parental Communication ($\beta = -.46$) and Parental Involvement General ($\beta = -.36$). In other words, higher levels of communication were predictive of lower overall academic performance. The aggregate result of checking for notes sent home and talking to their students about problems they may be having at school, what they are currently learning, and their goals for their future was associated with lower academic performance. Similarly, General Parental Involvement (i.e., feeling that one knows how to help one's child succeed and that it is one's job to help them learn, searching for more information on helping one's child learn, and finding it helpful to talk to the teacher about problems the child might be having) was found to negatively regress with overall academic performance.

These seemingly paradoxical findings are made understandable by the finding that Resource Room status was found to regress negatively with overall academic performance ($\beta = -.52$). It was noted earlier (see Table 3) that Resource Room students had significantly lower GPAs than Special Day Class students (2.29 vs. 3.12). Because of this underlying relationship, their parents' ratings of involvement led to their negative regression. Parents of Resource Room students reported heavy involvement in their children's schooling. In turn, their relatively lower academic grades due to their struggling in the more challenging academic environment led to the negative correlation with the parental involvement variables. That is, it is not that involvement by parents *caused* the students to perform more poorly. Rather, in keeping with earlier research findings on middle school students, it is the fact that these students were struggling academically that led to even greater parental involvement (Shumow & Miller, 2001).

In all, then, the current study with a special education sample found some consistency with earlier findings from mainstream education samples. It appears that Parental Expectations, just as Fan and Chen (2001) discovered in their meta-analysis, is a positive regressor of overall academic performance. Unlike with general education samples, however, some aspects of parental involvement were found to regress negatively with academic performance. Because of the substantially lower grades achieved by Resource Room students, Parental Communication and some general aspects of parental involvement were found to act as negative regressors of overall GPA.

The findings, potentially seen as paradoxical, should be considered provocative and as adding to the understanding of the complex interaction between parental involvement and academic performance. As such, they should be replicated before they are assumed to be characteristic of the population of special

education students. The current sample had its strengths as well as its shortcomings. Because of almost unanimous cooperation from parents, the sample consisted of 98% of special education students in the school, thus having very high representativeness. The academic achievement data were collected over the course of an entire academic year and, coupled with the representative sample, represent a sizable analysis of the underlying relationships. However, the study was conducted at only one school in one urban setting.

The study had a relatively modest sample size of 82 student participants that were approximately evenly divided between Resource Room and Special Day Class settings. A more sizable sample made up of only one type of special education class would allow a more direct analysis of the relationships under consideration. Other standardized measures of parental involvement may reveal relationships not addressed or found in the current study.

This study's measure of parental involvement consisted of only the parents' direct perspective—the most frequently studied perspective in this area, but certainly not the only viable one likely to be instrumental in determining student performance. This study, in keeping with earlier studies (Msengi, 2007), found that teacher perceptions and parents' self-ratings of involvement were not correlated within this sample. It is not entirely clear why that would be the case, but it is an issue worth investigating. Are teachers observing different behaviors on the part of parents that differ systematically from the ones parents are self-reporting? Are they less than fully aware of parents' expectations? Are their aggregate observations more impactful than either of theirs alone?

There are obviously other student groups that merit further investigation, for example, other grade levels, gender and ethnic differences, or student groups with other disabilities or strengths. Such investigations would add to the growing empirical literature on the relationship between parental involvement and students' academic performance.

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Appendix A: Parental Involvement Questionnaire

Strongly Agree (4) Agree (3) Disagree (2) Strongly Disagree (1)

I. Educational expectation/aspiration for children

- 1) I am confident that my child will fulfill the goals stated on his/her IEP.
- 2) I expect him/her to do well in school.
- 3) I expect my child will be able to read and write to succeed in everyday life.
- 4) I expect my child to graduate from high school.

II. Communication with children about school-related matters

- 5) I check for notes sent home by the teacher daily.
- 6) I talk to my child about problems he/she may have in school.
- 7) I talk to my child about what he/she is currently learning.

8) I talk to my child about his/her goals for the future.

III. Parental supervision/home structure related to school matters

9) I spend time helping my child with their homework every day.

10) I make sure my child has an area in the house just for doing homework.

11) I make sure my child understands his/her homework.

12) I regularly check my child's progress reports.

IV. Parental participation in school activities

13) I attend all of my child's IEP meetings.

14) I think it is important to take my child to school activities and/or classroom parties.

15) I volunteer at my child's school.

16) I think it is important for my child's success that I go to school activities.

V. Other/General parental involvement

17) I often search for more information on helping my child succeed.

18) I know how to help my child learn.

19) I find it helpful to talk with the teacher about problems my child may be having.

20) It is my job as the parent(s) to help my child do well in school.

Appendix B. Teacher Perception of Parental Involvement Scale

1. Do the parent(s) attend every IEP meeting that is required?	Strongly Agree	Agree	Disagree	Strongly Disagree
2. Do you feel that during the IEP meeting the parent(s) participate and bring up their ideas, concerns, and issues?	Strongly Agree	Agree	Disagree	Strongly Disagree
3. Do you feel that the parent(s) level of understanding during the IEP meetings is sufficient enough in order to promote their child's IEP goals?	Strongly Agree	Agree	Disagree	Strongly Disagree
4. Do you feel that there is a language barrier between the parent and yourself during these IEP meetings?	Strongly Agree	Agree	Disagree	Strongly Disagree
5. Is your student's parent in contact with you through email, telephone, notes, etc.?	Once a week	More than twice a month	Once a month	Not at all
6. How many hours has the student's parent fulfilled for the required service hours so far this school year?	100%	More than 50%	Less than 50%	None