CORRELATES OF FAMILY-SCHOOL PARTNERSHIPS IN SPECIAL EDUCATION

By

Meghan M. Burke

Dissertation

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Approved:
Professor Robert M. Hodapp
Professor Ruth A. Wolery
Professor Julie L. Taylor
Professor Erik W. Carter
Professor Elisabeth M. Dykens

This dissertation is dedicated to my brother, Ryan. His diligence and enthusiasm for learning never fail to inspire me. It is my privilege to be his sister.

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CHAPTER I

INTRODUCTION

Since its inception in 1975, the Individuals with Disabilities Education Act (IDEA) has promoted family-school partnerships. Originally incorporated as an accountability mechanism to ensure students with disabilities receive appropriate services, parents are written into the IDEA statute. For example, parents must give consent for evaluations, initial placement, and initial reception of services. Furthermore, parents have protective mechanisms such as procedural safeguards. Additionally, at individualized education program (IEP) meetings, parents and school staff come together to discuss the strengths and needs, goals and objectives, and services and placements for students with disabilities. Considering the requisites in IDEA, it is clear that the spirit of IDEA promotes family-school partnerships.

But the nature of such partnerships is not always specified nor its benefits enough discussed. Summers, Hoffman, Marquis, Turnbull, Poston and Nelson (2005a) characterized family-school partnerships as "…mutually supportive interactions between families and professionals, focused on meeting the needs of students and families, and characterized by a sense of competence, commitment, equality, positive communication, respect, and trust" (p. 3). Furthermore, research demonstrates the strong influence of family-school partnerships upon student achievement. According to the "Strong Families, Strong Schools" report, "thirty years of research shows that greater family involvement in children's learning is a critical link to achieving high quality education and a safe, disciplined learning environment for every student” (p. 1, U.S. Department of Education, 1994). Studies completed from the mid-1960s until today confirm this relation, finding that school-family involvement programs have immediate, positive results upon students’ academic achievement (Sheldon & Epstein, 2005), regardless of socioeconomic and educational levels (Henderson & Mapp, 2002). Transcending seemingly impermeable layers of financial and educational backgrounds, parental involvement is one way to improve academic achievement.

Parental involvement impacts student academic achievement in many ways. For example, parents improve their students’ achievement by completing homework with their students, attending school events, and communicating with the school (Jeynes, 2007). Furthermore, in special education, when parents collaborate with the school, the student is better prepared for program placements and the legal requirements of IDEA are more likely to be met (Wolery, 1989). In short, increased parental involvement leads to the fulfillment of the IDEA and better achievement for students with disabilities.

While research and legislation support family-school partnerships, little research exists about which factors affect family-school partnerships for students with disabilities. In addition, to date, most research about family-school partnerships in a special education context is qualitative (Summers et al., 2005a). This present study quantitatively examines child, parent, and school characteristics which relate to family-school partnerships. Before discussing the methodology of this study, it is important to examine existing research about family-school partnerships.

A Review of the Literature

I first describe the barriers to family-school partnerships in special education, before discussing the strengths and weaknesses of using a web-based survey to further examine family-school partnerships. Within the context of web-based surveys, I hypothesize how variables might be related to successful family-school partnerships.

Barriers to Family-School Partnership. Compared to Head Start and other compensatory programs, parent participation rates are lower in special education (Harry, 1992). Having strong family-school partnerships is especially important in special education because, without such strong partnerships, disagreements may escalate to legal hearings (Mandlawitz, 2002), leading to increased stress, costs, and destroyed relationships for parents and schools alike (Lake & Billingsley, 2000). As such, it is important to identify the obstacles in achieving strong family-school partnerships; such obstacles may relate to child, parent, or school characteristics.

Certain child characteristics may relate to family-school partnerships. For example, the behavioral needs of the child may negatively affect the family-school relationship. Many parents of students with behavioral problems primarily hear from the school after behavioral incidents (Darch, Miao, & Shippen, 2004). Primarily hearing negative feedback from the school may discourage the parent from interacting with the school, thereby weakening the family-school partnership. Another issue, which specifically affects students with behavioral needs, relates to stigma. Students with emotional disturbances face stigma from the general public, which may include school professionals (Friesen & Huff, 1990). The combination of stigma and negative feedback may weaken family-school partnerships.

In addition to maladaptive behavior, the age of the student may also affect the family-school partnership. In general, younger students tend to receive more family-centered services, older students more individual-based services (Dunst, 2002). Furthermore, parent satisfaction with services declines as the student ages (Summers et al., 2007). Consequently, family-school partnerships may weaken as the child ages.

Parent characteristics may also affect family-school partnerships. For example, many culturally and linguistically diverse (CLD) families feel that school personnel do not respect their beliefs (Harry, 2002). Because of their backgrounds, these families may face unique barriers related to respect and acceptance as they partner with the school. In addition to cultural background, the personality of the parent may also affect the family-school partnership. While parents want to advocate for their children, becoming too aggressive or adversarial in the IEP process may harm the family-school partnership (Pruitt, Wandry, & Hollums, 1998). Parents must walk a fine line, balancing extroversion and advocacy without being too assertive. Cultural background and personality are just a few of the parent characteristics that may relate to family-school partnerships.

Along with child and parent characteristics, school characteristics may also affect family-school partnerships. One prong of the family-school partnership is communication. Frequent communication between the home and the school is necessary for positive family-school partnerships (Blue-Banning, Summers, Frankland, Nelson, & Beagle, 2004). In one study, for example, the authors asked parents to suggest ways to improve IEP meetings; 71% of all responses related to communication (Denton, 1983). Another school characteristic is the type and frequency of services offered. When parents are satisfied with the related and supplementary services that their students with disabilities receive, they may be more likely to have stronger family-school partnerships (Summers et al., 2007).

Based on existing research, it is clear that a variety of parent, child, and school characteristics relate to family-school partnerships. Characteristics related to the parent may include the personality type and the educational background. Related to the child, traits such as age and type of disability, may affect the family-school partnership. Finally, frequency of parent-school communication and parental satisfaction with services may further relate to the partnership. In attempting to understand the obstacles and, correspondingly, potential solutions to overcome such obstacles to positive family-school partnerships, it is necessary to examine each of these factors.

Web-based Studies. In the current context of family-school partnerships in special education, most research is qualitative (Summers et al., 2005a). One way to understand families of students with disabilities on a larger scale is to use web-based surveys (Bailey, Raspa, & Olmsted, 2010). While currently most surveys are still paper-and-pencil questionnaires, web-based studies are becoming increasingly common. Compared to paper-and-pencil surveys, web-based studies offer several distinct advantages.

The results of web-baseed studies are generally replicated by other methodologies (Birnbaum, 2004; Dillman & Smyth, 2007; Gosling, Vazire, Srivastava, & John, 2004). Such cross-method studies have been conducted in self-monitoring (Buchanan & Smith, 1999) and self-esteem (Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002). Srivastava, John, Gosling, and Potter (2003) directly compared a web-based study and a paper-and-pencil study about personality development. In spite of the different methodologies, findings demonstrated that the results were the same across groups.

Another advantage of web-based studies relates to efficiency. With web-based studies, the data may be immediately input into a statistical software program (van Gelder, Bretveld, & Roeleveld, 2010). With paper and pencil surveys, the researcher must manually input data into a statistical software program. Saving this step of manually inputting data, web-based studies may include applications so that the researcher can "point and click" to input their data into a preferred statistical package. In addition to transferring data to databases, web-based studies are also efficient because they reduce lag time. With paper and pencil studies, the researcher has to wait for surveys to be delivered (via mail) to the University. In contrast, with web-based studies, the data are immediately available for the researcher after each respondent's completion of the survey. For the researcher, web-based studies are an efficient way to collect data.

Web-based studies are also cost efficient (van Gelder, Bretveld, & Roeleveld, 2010). Not having to purchase address labels, envelopes, and stamps, the only cost associated with a web-based study is the cost to buy the web-based programs. Some web-based programs are even free to researchers at universities (e.g., RedCap). As such, web-based studies may offer a cost-efficient way for researchers to collect data.

Web-based surveys also have a few disadvantages that should be noted. One disadvantage relates to the design of the survey itself. If the respondent does not have clear directions to scroll down or click to the next page, then the survey may be incomplete (van Gelder, Bretveld, & Roeleveld, 2010). To address this problem, the survey developer can test-run the web-based survey before launching the study. This way, unclear directions can be detected and clarified.

Another disadvantage is self-selection bias. Participants who complete web-based surveys are more likely to be individuals who have access to the internet. Respondents are thus more likely to be White and highly educated (van Gelder, Bretveld, & Roeleveld, 2010). So far, when used in disability research, web-based studies do seem to over-represent White, female, and highly educated respondents (see Hodapp & Urbano, 2007; Hodapp, Urbano, & Burke, 2010). This disadvantage, however, must be considered in context. The challenges that White and highly-educated respondents face also tend to exist for less educated and minority individuals. The difference, typically, is that these challenges are exacerbated in the latter population (van Gelder, Bretveld, & Roeleveld, 2010). In order that web-based surveys can be accessible to the wider population, they should be available in additional formats (e.g., paper and pencil format) and extra efforts should be made to recruit minority and less educated participants (Dillman, 2006).

While not perfect, web-based studies offer one way to collect data on a large sample of individuals. Especially in a field in which we know very little, web-based studies can be particularly helpful in developing a beginning understanding. To this end, the field of family-school partnerships in special education would seem especially amenable to large-scale, web-based surveys.

Research Questions

This study examines characteristics that may relate to family-school partnerships. Based on recent literature, we know very little about how these partnerships differ with respect to student, parent, and school characteristics (Summers et al., 2005a). Using the Family-Professional Partnership Scale as the outcome measure, the overarching research question of this study is: Which child, parent, and school variables relate to the quality of family-school partnerships?

Currently, three published studies, all completed in the United States and written in English, have used the Family-Professional Partnership Scale to examine which factors affect family-school partnerships. The first, by Summers et al. (2005a), used the scale to develop its initial factors. Another study (Summers et al., 2005b) examined whether the importance of the child and parent subdomains were consistent across ages of the child. Finally, one study used the Family-Professional Partnership Scale to see how it relates to service delivery satisfaction and family quality of life (Summers et al., 2007). Summers and colleagues (2007) found that, overall, families were satisfied with their partnerships with the primary service providers. The Summers et al. (2007) study, however, only included students with disabilities aged 0-5 years.

In examining the correlates of better and worse family-school partnerships, this study examines three categories of variables: child, parent, and school characteristics.

Characteristics Predicted to Relate to Family-School Partnerships

Child characteristic: Level of independence. Across cultures, individuals tend to agree with the diagnosis of severe disabilities in students for whom major deficits are apparent in gross and fine motor skills, cognition, social skills, and language. Disagreements arise, however, with the diagnosis and eligibility of students with such mild disabilities as mild intellectual disabilities, learning disabilities, and emotional/behavioral disorders (Harry, 2002). In IEP meetings, families and schools may have more disagreements about students with more (versus less) independence. I hypothesize that, if the child has more independence, then the family and the school will have a less positive family-school partnership.

Child characteristic: Severity of behavior problems. Parents of students with problem behaviors frequently have little positive communication with the school (Darch, Miao, & Shippen, 2004). Because parents of students with problem behaviors almost exclusively receive negative (versus positive) information about their children, they may be less likely to develop collaborative relationships with the school. Furthermore, parents of students with problem behaviors are much more likely to encounter stigma from the school as well as other child-serving systems (Osher & Osher, 2002; Friesen & Huff, 1990). I hypothesize that parents of children with greater behavior problems will have less positive family-school partnerships.

Child characteristic: Age. Given that family-centered practices decrease as students get older (Dunst, 2002), the age of the student may relate to a worsening relationship between the parent and the school. Summers and colleagues (2005b) used the Family-Professional Partnership Scale to discern how parents of younger versus older students perceived the importance and satisfaction of the relationship with the school system. As the child aged, parents became less satisfied with their school partnerships. I hypothesize that the younger the child over the 3-21 year period, the stronger the family-school partnership.

Child characteristics: Disability. The child's type of disability may also affect the family-school partnership. Hernandez and colleagues (2008) compared parent involvement among parents of students with high-incidence disabilities (i.e., learning disabilities and speech/language impairments) versus low-incidence disabilities (i.e., all other disabilities). They reported that parents of students with low-incidence (versus high-incidence) disabilities were more likely to be aware of their rights and to attend IEP meetings and less likely to be satisfied with their student's progress and reception of services. The incidence-rate of the disability may thus affect the family-school partnership, as families are more likely to have collaborative family-school relations when the school professionals understand the students' disabilities (Zionts, Zionts, Harrison, & Bellinger, 2003; Wang, Mannan, Poston, Turnbull, & Summers, 2004; Blue-Banning et al., 2004). If the child has a rare or low-incidence disability, the school may be less likely to understand the child's disability and, thus, less likely to have a positive relationship with the family. I hypothesize that low-incidence disabilities (e.g., intellectual disabilities) correspond to weaker family-school partnerships.

While Hernandez and colleagues (2008) provide an initial understanding as to the effect of the disability upon family-school partnerships, they did not disaggregate their sample by each disability. There may be more than the incidence rate of the disability which affects the family-school partnership. As such, I propose to examine a few disabilities more carefully in this study. Cohen (2009) reviewed special education court cases and found that parents of students with certain disabilities are more likely to engage in arguments with the school about the type of instruction. For this study, I will look at the four disability groups Cohen (2009) identified as more litigious. For example, parents of students with deafness/hearing impairments are likely to disagree with the school over total vs. oral communication. In addition, parents of students with learning disabilities are likely to argue with the school over multi-sensory reading programs, whereas parents of students with emotional/behavioral disorders as well as autism are likely to argue over applied behavior analysis services. As I hypothesize that such disagreements will lead to weaker family-school partnerships, I will look at each of these disabilities separately.

Child characteristic: Placement. The educational placement of the child may also affect the family-school partnership. Ryndak and Downing (1996) examined 13 parents of students with disabilities to understand their feelings toward placement in regular education versus special education self-contained classrooms. Families of students in self-contained classrooms felt their students received repetitive, meaningless, and non-functional work. Furthermore, parents felt their students' programs were, in fact, group programs for the self-contained class; their students did not receive individualized programs in accordance with their IEPs. Parents of students in self-contained (versus regular education) classes felt their input was unwelcomed by school professionals. As such, I hypothesize that parents of students who are in more segregated classrooms are less likely to have collaborative family-school partnerships.

Parent characteristic: Educational level. One way in which the educational level of the parent may affect the family-school partnership is parents with greater education may be more likely to understand their procedural safeguards and navigate the special education system. For example, materials informing parents of their procedural safeguards have very high reading levels. Thus, many parents feel they are largely inaccessible (Fitzgerald & Watkins, 2006; Imber & Radcliffe, 2003; Mandic, Rudd, Hehir, & Acevedo-Garcia, 2010; Pruitt, 2003). Mandic and colleagues (2010) documented that the average reading level of procedural safeguards was 16th grade. Of all of the information concerning procedural safeguards across the country, 6% scored at the high school reading level, 55% at the college reading level, and 39% at the graduate school reading level. For parents who have attended college and, correspondingly, can read college-level text, they may be more likely to understand their rights, act as equal partners with the school system, and have stronger family-school partnerships.

Parent characteristics: Race and culture. From two literature reviews about families who are culturally and linguistically diverse (CLD: Harry, 1992; 2008), it is clear these families face unique barriers in partnering with the school system. In its loosest interpretation, CLD families are individuals who do not belong to the mainstream culture or do not speak the national language (Turnbull, Turnbull, Erwin, Soodak, & Shogren, 2011). When collaborating with the school system, CLD families face specific obstacles related to discrimination, stereotyping, and disproportionality (Turnbull et al., 2011). As such, I hypothesize that CLD families have less strong family-school partnerships.

Parent characteristic: Personality. One dimension of family-school partnerships is respect (Blue-Banning et al., 2004). As a part of acting respectfully, parents must be assertive but not adversarial when collaborating with the school system (Fish, 2006; Hammond et al., 2008; Trainor, 2010). Parents who have open and conscientious personalities may be more respectful and have stronger family-school partnerships. Additionally, parents who are more extroverted and, consequently, participate in IEP meetings, may enjoy more positive family-school partnerships. Conversely, parents who are neurotic or anxious about services may be more likely to have weaker family-school partnerships. As such, I hypothesize that families who have more extroverted personalities will have stronger family-school partnerships.

Parent characteristic: Advocacy and knowledge activities. When parents have a solid understanding of their special education rights, they are more likely to have equal family-school partnerships (Fish, 2006; Hess et al., 2006; Trainor, 2010). Some parents feel the school is more likely to actively listen if the parents are knowledgeable about special education law (Fish, 2008). Other parents feel their knowledge of special education law enables their students to receive special education services (Hess et al., 2006). I hypothesize parents who engage in advocacy and knowledge activities will have strong family-school partnerships.

School characteristic: Services. In understanding the family-school partnership, it is necessary to examine the level of parental satisfaction with the services received. Parents who are dissatisfied with school services experience increased stress and decreased equality in collaborating with the school (Soodak & Erwin, 2000). Conversely, parents who are satisfied with the services their children receive have stronger family-school partnerships (Summers et al., 2007). Parents who are satisfied with their students' services are hypothesized to have stronger family-school partnerships.

School characteristic: Communication. Many parents want more frequent communication from the teachers and related service providers (Angell et al., 2009; Esquivel et al., 2008; Hammond et al., 2008; Munn-Joseph & Gavin-Evans, 2008; Stoner et al., 2005). One study summarized the importance of communication saying, "…parents felt that the key to successful home-school partnerships was communication" (p. 185, Lo, 2008). I hypothesize that when parents have frequent communication with the school, they are likely to have stronger family-school partnerships.

CHAPTER II

METHOD

Participant Selection

This study has a total of 1,004 participants. Respondents averaged 43.81 (*SD*=7.49) years of age. Respondents ranged in age from 18 to 70 years old. A majority of the respondents was female (89.2% or *n* = 896 participants). Furthermore, most were highly educated (66.9% or *n* = 672 had at least college degrees) and married (82.6% or *n* = 829). Most respondents were White (86.1% or *n* = 865 participants), with smaller proportions identified as African American (5.2% or *n* = 52), Hispanic (3.3% or *n* = 33), Asian (.9% or *n* =9), and other ethnicities (4.5% or *n* = 45).

The students of the respondents averaged 10.96 (*SD*=4.40) years of age. Students ranged in age from 3 to 22 years old and most were male (68.7% or *n* = 690). Students had a variety of types of disabilities, including autism (47% or *n* = 472), developmental delays (32.8% or *n* = 329), learning disabilities (31% or *n* = 311), and intellectual disabilities (18.8% or *n* = 189). See Table 1.

Along with Washington D.C., 47 of the 50 states were represented among this study's participants (Delaware, Hawaii, and Wyoming were not represented). Thirty-one (31) states had 10 or more respondents and 7 of these were also among the 10 most populous U.S. states (California, 6.2%; New York, 5.7%; Massachusetts, 5.2%; Texas, 5.1%; Pennsylvania, 4.5%; Illinois, 3.7%; Michigan, 3.0%). Also in this survey's "top 10" were: Tennessee, 14.7%; Virginia, 4.8%; and Wisconsin, 4.3%.

Table 1.

Participant Demographics

Demographic	% (*n*)
Role	
Father	6.6% (65)
Mother	89.2% (896)
Other	4.2% (43)
Marital status	
Married	82.6% (829)
Never married	3.9% (39)
Separated/Divorced/Widowed	13.5% (136)
Income	
Less than $15,000	6.7% (67)
$15-29,999	6.2% (62)
$30,000-49,999	14.7% (148)
$50,000-69,999	15.0% (151)
$70,000-99,999	23.3% (234)
More than $100,000	34.1% (342)
Education level	
Some high school	1.0% (10)
High school	4.5% (45)
Some college	27.6% (277)
Four-year degree	31.9% (320)
Graduate degree	35.0% (352)
Disability:	
Intellectual disability	18.8% (189)
Developmental delay	32.8% (329)
Down syndrome	8.8% (88)
Autism	47.0% (472)
Speech Language	34.7% (348)
Learning disability	31.0% (311)
Deaf/Hearing impairment	4.4% (44)
Fragile X	0.2% (2)
Prader-Willi	0.3% (3)
Emotional/behavioral	10.6% (106)
Blind/visual impairment	5.8% (58)
Cerebral Palsy	6.3% (63)
Health condition	13.2% (133)
Williams syndrome	3.2% (32)

Recruitment Procedures

In collaboration with several Vanderbilt professors, the questionnaire was developed and revised. Upon revision, the questionnaire and the study itself were approved by the IRB. The completed, approved questionnaire was then put onto a secure web-site of the Vanderbilt Kennedy Center. Before launching the study, several individuals test-ran the web-based survey to ensure the directions were clear. As survey responses accumulated, they were stored on the RedCap program (Harris, Taylor, Thielke, Payne, Gonzalez, & Conde, 2009), which were downloaded periodically to guard against computer malfunctions. The study was posted on the internet in December of 2010 and was made available to the public until June of 2011.

To attain a diverse sample, participants were recruited in a variety of ways. First, e-mails and flyers were sent to local, state, and national parent support group agencies, the Association of University Centers in Disabilities (AUCD), and all 106 parent training and information centers (PTIs). Using this strategy, approximately 228 agencies were contacted. Furthermore, e-mails and flyers were sent to each agency listed under *A-Z Yellow Pages for Disabilities* (http://www.yellowpagesforkids.com/help/az.htm). The numbers of such agencies ranged from a high of 799 in California and 470 in New York to a low of 30 in Wyoming and 33 in South Dakota. All agencies on this website were sent information about the study. Additionally, the study was available on StudyFinder at the Vanderbilt website (http://kc.vanderbilt.edu/site/services/studyfinder/).

Due to the widespread efforts to publicize the study, I received many phone calls and e-mails for further information, and the study was posted on the websites of many agencies. Furthermore, some national disability agencies listed the study for their constituencies (e.g., Williams Syndrome Association).

Although most surveys were completed electronically, respondents could also complete and return paper versions of the survey. In all newsletter and web-based advertisements, potential respondents were informed that they could either call or e-mail the principal investigator (e-mail requesters could receive either a mailed paper version or a word document attached to the return e-mail). Responding to both phone and e-mail requests, over 50 paper surveys were distributed. Only 5 paper-based responses were returned (these returned surveys were then entered onto the web-site). To avoid spam filters, e-mails were sent to agencies in batches of five over the course of a month from December 16, 2010 to January 13, 2011. Each night, I sent over 250 e-mails, which were ultimately sent to 7,843 agencies.

The Parent-School Collaboration Survey took approximately 20-25 minutes to complete. Upon going to the address of the web-site, respondents first saw a screen describing the study. Once agreeing to participate, the respondent was then directed to the second screen, which contained a brief description of the survey and the survey itself. Upon completing the survey, the respondent was thanked. Respondents then submitted their survey responses. By pushing the completion button, the survey was submitted to the web-site. In addition to completing the survey, 49 respondents e-mailed me and asked for the results of the study. Having recorded the names and contact information of these individuals, I will send preliminary results to these respondents over the next few months.

Types of Organizations Approached

To attain a diverse sample, participants were recruited throughout the United States and across different types of disability-related agencies. I sent an e-mail and a flyer to introduce each agency to the study and to invite their participation. I sent an e-mail to every agency listed under the A-Z Yellow Pages for Disabilities. Types of agencies notified about this study included the following:

Support groups: Agencies which listed support groups for parents under their mission were labeled as parent disability support groups. Agencies included: chapters of the National Down Syndrome Society, chapters of the Autism Society, and other disability-specific agencies. For this study, I contacted over 436 support groups.

Advocates and attorneys: Agencies that listed advocacy and/or legal representation in their descriptions were coded as advocacy or legal agencies. These agencies included: private attorneys, protection and advocacy agencies (P&As), and private advocacy agencies. For this study, I contacted over 1,725 attorneys, advocates, and legal agencies.

Private providers: These agencies were described as places where families could receive direct services for their students. Agencies in this category included: behavioral consultation services, tutoring, Lindamood bell services, and private evaluations. Over 3,025 private providers were contacted.

Schools and educational agencies: This category included both private schools (e.g., School for the Blind) and public schools. Also included in this category were state departments (e.g., Department of Special Healthcare Child needs). I contacted over 1,386 schools and educational agencies.

Non-profit disability agencies: These were disability agencies that did not include support groups as a part of their descriptions. Agencies included chapters of The Arc. For this study, I contacted over 1,271 non-profit, disability agencies.

Measures

Specifically designed for this study, the Parent-School Collaboration Survey was comprised of 3 distinct sections related to the child, parent, and school. Except for the final questions, responses generally involved clicking on the appropriate response to one of the options, which involved responses that were either categorical (e.g. gender) or on a Likert-scale. Certain questions were borrowed from existing short-form measures; these are indicated in the appropriate sections. Below, I describe the sections in relation to who they refer: child, parent, and school.

Child variable: Child's skill level. The skill level of the individual with a disability was comprised of 15 items from the Activities of Daily Living scale (ADL: Seltzer & Li, 1996). Questions included "To what extent can your child perform the following activities?". Activities included: walking, speaking, reading, eating, preparing meals, taking medications (if applicable), grooming/personal hygiene, performing household tasks, performing basic financial tasks, running errands, participating in leisure activities, living independently, working at a job, maintaining friendships, and maintaining intimate relationships.

Parents answered these questions on a five-point Likert scale. Scale options ranged from: (1) not at all; (2) some; (3) somewhat/sometimes; (4) moderately well; and

(5) very well. Variables were then summed into a single, cumulative score ranging from 15 to 75, with higher scores indicating greater functional independence.

The ADL is highly reliable (Cronbach's alpha=.91). In prior work, this scale has been used to provide a rough estimate of functional abilities of individuals with disabilities (Seltzer & Li, 1996; Hodapp, Urbano, & Burke; 2010; Burke, Taylor, Urbano, & Hodapp, 2012).

Child variable: Degree of child's behavior problems. The Scales of Independent Behavior-Revised (SIB-R) (Bruininks, Woodcock, Weatherman, & Hill, 1996) is an eight-item scale of broad maladaptive behaviors including internalizing, externalizing, and asocial behaviors. Parents were asked to complete responses based upon whether, in the past six months (including now), their child has experienced any of the behaviors and, if so, the frequency and severity of the behaviors. Behaviors included: self-injurious behavior (hurtful to him/herself, injured own body by hitting, banging head, or scratching); destructive or hurtful to others (caused physical pain to other people or animals); destructive to property (deliberately defaced or destroyed things); disruptive behavior (interfered with the activity of others by clinging, pestering or teasing); unusual or repetitive habits (pacing, rocking, twirling fingers, or talking to him/herself); withdrawn or inattentive behavior (difficulty being around others or paying attention); socially offensive behavior (talking too loudly, swearing, touching others too much, or belching); and uncooperative behavior (refusing to obey or refusing to go to school or work).

If parents responded "yes" to any of the behaviors, they then answered questions related to the frequency and severity of the behavior. The frequency of the behavior was gauged by a five point Likert scale: (1) less than once a month; (2) 1-3 times per month; (3) 1-6 times per week; (4) 1-10 times a day; and (5) 1 or more times an hour. Parents gauged the severity of the behavior by answering the question: “How serious is this behavior?” The responses were on a five-point Likert scale: (1) not; (2) slightly; (3) moderately; (4) very; and (5) extremely. The General Maladaptive Index (GMI) indicates the degree of serious problem behaviors present with higher scores inferring more serious maladaptive behaviors.

The manual (Bruininks, et al., 1996) notes good reliability (Cronbach’s alpha =.80). Additionally, the SIB-R has been used in previous studies of individuals with disabilities (e.g., Baker, Smith, Greenberg, Seltzer, & Taylor, 2011; Esbensen, Bishop, Seltzer, Greenberg, & Taylor, 2010; Taylor & Seltzer, 2010).

Child variable: Age of the child. The age of the child was reported by the respondent as the age in years of the child at the time of the survey’s completion.

Child variable: Type of disability. Respondents marked any of fifteen disabilities that described their children. The fifteen disabilities included: intellectual disability, developmental delay, Down syndrome, autism, fragile X syndrome, Prader-Willi syndrome, emotional disturbances, blind/vision impairment, cerebral palsy, Williams syndrome, health condition, speech and language impairment, learning disability, deaf/hearing impairment, and other.

For each disability category, the parent marked whether the child had each disability. Parents could check more than one disability condition (e.g., autism and intellectual disability). This question has been used in previous studies about families of individuals with disabilities (e.g., Burke et al., 2012; Hodapp, Urbano, & Burke, 2010; Hodapp & Urbano, 2007).

Child variable: Degree of inclusion. In the survey, one question was asked about placement: “How much time does your child spend in the regular education classroom?”. The responses were on a five point Likert scale: (1) 0-20%; (2) 21-40%; (3) 41-60%; (4) 61-80%; and (5) 81-100%.

Parent variable: Highest level of education. Respondents answered: “What is your highest level of education?”. Possible responses were: (1) some high school; (2) high school degree; (3) some college; (4) 4-year degree; and (5) graduate/professional degree.

Parent variable: Race. Respondents answered two questions related to ethnicity: (1) “What ethnicity are you?” and (2) “Are you Hispanic?”. The first question had four options: African-American, Caucasian, Asian, and Other. The second question was dichotomous offering “yes” or “no” as the only responses. In alignment with the definition of culturally and linguistically diverse (CLD) families (Turnbull et al., 2011), these two questions were then combined to create a dichotomous variable of White versus Non-White participants.

Parent variable: Type of personality. Respondents answered 10 items. These ten items were from the scale of the Big Five Inventory-10 (BFI-10) (Rammstedt & John, 2007). There are five factors on the scale; each factor has two items. The five factors include: extraversion, agreeableness, conscientiousness, neuroticism, and openness. For example, an item under the “extraversion factor” was “I see myself as extroverted, enthusiastic.” Alternatively, a reverse-scored item related to the “agreeableness” factor was “I see myself as critical, quarrelsome”. Based upon responses, personalities were construed as: extroverted, agreeable, conscientious, neurotic, and open.

Parents responded to these questions on a seven point Likert scale: (1) disagree strongly; (2) disagree moderately; (3) disagree a little; (4) neutral; (5) agree a little; (6) agree moderately; and (7) agree strongly.

The BFI-10 has a high degree of reliability (test-rerest reliability of $r = .72$) (Rammstedt & John, 2007). Furthermore, the BFI-10 has been used in previous educational studies (e.g., Freudenthaler, Spinath, & Neubauer, 2008; Rammstedt, Goldberg, & Borg, 2010).

Parent variable: Advocacy and knowledge activities. To date, few instruments exist to measure the attempts of the parent to gain special education advocacy and knowledge. For this study, I developed eight questions to quantify the efforts of parents to attain knowledge and advocacy skills. The questions included:

- Have you ever used an advocate/attorney to attend an IEP meeting?
- Have you ever had someone else (~not an advocate) attend an IEP meeting with you?
- Have you ever attended a workshop about your special education rights?
- Have you ever had difficulty reading and understanding your special education rights?
- Have you ever called an agency to ask about your special education rights?
- Have you ever searched the internet for your special education rights?
- Have you ever read a copy of your special education rights or procedural safeguards? and

- Have you ever talked with another parent about your special education rights?

Respondents answered these questions on a five point Likert scale: (1) never; (2) occasionally; (3) sometimes; (4) often; and (5) very often.

School variable: Frequency and satisfaction with school services. The services inventory asked parents to respond to questions about the related and supplementary services their children receive (Summers et al., 2007). The services included: speech and/or language services, one-on-one aide services, special education services, physical and/or occupational therapy, behavior support services, self-care skills training, hearing and/or vision services, health services, transportation and/or mobility services, special equipment, service coordination, transition, counseling and/or psychological services.

The services inventory asked parents to rate which services their students received: (0) no or (1) yes. If a particular service was received, the parents were then asked how satisfied they were with the service: (1) very dissatisfied; (2) somewhat dissatisfied; (3) neither satisfied/dissatisfied; (4) somewhat satisfied; and (5) very satisfied. The services inventory has been used in previous studies about students with disabilities (Summers et al., 2005a; Summers et al., 2005b).

School Variable: Frequency of Communication. To understand the frequency of communication between the parent and the school, one question related to communication was asked: “How often do you communicate with your child’s teacher?”. Responses to this question were on a three-point Likert scale: (1) monthly; (2) weekly; and (3) daily.

Dependent and Independent Variables

In this study, the dependent variable is the Family-Professional Partnership Scale. The independent variables relate to the measures mentioned above including: child characteristics (functional abilities, problem behaviors, age, disability, and degree of inclusion), parent characteristics (educational level, race, personality, and advocacy and knowledge activities), and school characteristics (satisfaction with services and frequency of communication between the family and the school). These dependent variables were chosen based upon existing literature.

Dependent variable: Family-Professional Partnership Scale

Summers et al. (2005a) created the Family-Professional Partnership Scale to gauge the satisfaction of a family with their relationship with professionals (e.g., the school). The Family-Professional Partnership Scale was field tested in two studies; both studies were described in the same article (Summers et al., 2005a). In Study 1 ($N = 291$), the instrument was created and refined. Factor analyses demonstrated two clearly differentiated factors: Child-Focused Relationships and Family-Focused Relationships. Each factor had at least eight items. The Cronbach's alpha for Child-Focused Relationships was .92 and for Family-Focused Relationships was .91. Both subscales were used for analyses in this study.

The second study further refined the scale and evaluated its psychometric properties. Because Study 1 reduced the number of items from 20 to 18, Summers et al., conducted Study 2 ($N = 205$) with a reduced number of items. In Study 2, the Cronbach's alpha for Child-Focused Relationships was .94 and for Family-Focused Relationships was .92. The final scale consists of 18 items, with two subscales (Child-Focused and Family-Focused) of 9 items each. Participants responded to these questions on a five-point Likert scale: (1) never; (2) occasionally; (3) sometimes; (4) often; and (5) very often.

The nine items of the Child-Focused Relationship subscale include: "To what extent are you satisfied that your child's IEP team…"

- helps you gain the skills or information to get what your child needs
- has the skills to help your child succeed
- provides services that meet the individual needs of your child
- speaks up for your child's best interests when working with other service providers
- lets you know about the good things your child does
- treats your child with dignity
- builds on your child's strengths
- values your opinion about your child's needs, and
- keeps your child safe when your child is in their care.

The Family-Focused Relationship subscale measures the extent to which parents are satisfied with the school. The questions were: "To what extent do you feel your child's IEP team…"

- is available when you need them
- is honest, even when they have bad news
- uses words that you understand
- protects your family's privacy

- respects your family’s values and beliefs
- listens without judging your child or family
- is comprised of people that you can depend on and trust
- pays attention to what you have to say and
- is friendly.

Because the Family-Professional Partnership scale has two subscales (Child and Family), this study has two outcome variables.

Independent variables

For this study, there were 18 independent variables. Most (9) variables were continuous (level of independence of the child, behavior of the child, age, personality of the parent including less neurotic, extroversion, conscientiousness, and openness, advocacy and knowledge activities, and satisfaction with services). Three variables had 3-5 Likert scale options: degree of inclusion, educational level of the parent, and frequency of communication between the parent and the school. The remaining six independent variables were categorical (i.e., disability of the child-emotional disturbance, learning disability, deaf and/or hearing impairment, autism, and intellectual disability, and race of the parent).

Analytic Procedures

For this study, I conducted preliminary analyses related to three distinct issues: inter-item relations, missing data, and distribution of responses. To determine whether scaled measures should be examined as a singular construct or separately, I assessed the internal consistency of the questions using Cronbach’s alpha and factor analysis. If Cronbach’s alpha was less than .60, I treated the items as individual variables.

I then examined the data for missing values in scaled constructs looking at the missing values to see if they constituted a pattern. For these analyses, mean scores were substituted for missing values following the guidelines of Harrell (2001).

Finally, regarding the distribution of the variables, I calculated descriptive statistics on independent and dependent variables. In examining the distribution of the dependent variables, I looked to see that they were normally distributed. If the variables did not have normal distributions, I considered transforming the variables or using non-parametric statistics.

CHAPTER III

RESULTS

Preliminary Findings

Reliability of Constructs. To confirm that measures were indeed single constructs, I tested the internal consistency of the following established measures: ADL (1 domain, 15 items), BFI-10 (5 domains, 10 items), and Family-Professional Partnership Scale (2 domains, 18 items). The 15 items of the ADL produced a Cronbach's alpha of .91. As in the original study, the Family-Professional Partnership Scale produced two factors, relating to Child and Family subscales, which together accounted for 72% of the variance and which each had very high alphas (.95 and .94, respectively).

Findings for the BFI-10 were somewhat more complicated. Instead of producing 5 factors, the 10 items loaded on four distinct factors, which were labeled as extroverted, conscientious, open, and (less) neurotic, respectively (the BFI-10's agreeableness domain did not emerge as a separate factor). These four factors accounted for 63.4% of the variance. As a few items loaded negatively, these items were reverse-scored to attain total scores for a particular factor. See Table 2 for the item loadings and eigenvalues for the BFI-10 items.

Table 2

Variable Loadings and Factor Structure of the BFI-10 Scale

Item	Factor 1: (Less) Neuroticism	Factor 2: Extroversion	Factor 3: Conscientiousness	Factor 4: Openness
Anxious, easily upset-R	.83			
Calm, emotionally stable	-.72			
Critical, quarrelsome-R	.72			
Reserved, quiet-R		-.88		
Extroverted, enthusiastic		.83		
Dependable, self-disciplined			.80	
Disorganized, careless-R			-.75	
Open to new experiences, complex				.52
Sympathetic, warm				.70
Conventional, uncreative-R				-.65
Percent of variance	18.17	17.45	14.41	13.37

**Items with the "R" notation indicate reverse-coding

One additional measure, the Special Education Advocacy Scale, was specifically constructed for this study. To determine whether these 8 items constituted a single measure, I performed both factor analysis and Cronbach's alpha. The 8 items loaded on a single factor, Cronbach's alpha was high (.82), and the measure accounted for slightly less than half (45.88%) of the variance. See Table 3.

Table 3

Factor Structure of the Advocacy and Knowledge Activities Scale

Item	Factor 1
Used an advocate/attorney to attend an IEP meeting	.64
Had someone else (not an advocate) attend an IEP meeting with you	.53
Had difficulty reading and understanding your special education rights	.45
Attended a workshop about your special education rights	.71
Called an agency to ask about your special education rights	.77
Searched the internet for your special education rights	.81
Read a copy of your special education rights or procedural safeguards	.72
Talked with another parent about your special education rights	.77

Missing data. Following the analyses for internal consistency, I dealt with the issue of missing data. Imputation was needed only for the following scales: Activities of Daily Living; Advocacy and Knowledge Activities; Family-Professional Partnership Scale; and BFI-10. For each scale, I only imputed scores when missing data accounted for 25% or less of the scale (e.g., the respondent had to have completed 75% or more of the scale).

A total of 2,397 individuals started the survey. However, 37% (*n* = 896) of respondents stopped answering questions before the Family-Professional Partnership Scale (the outcome variable). Consequently, imputation was first performed across the sample of 1,501 participants. For the Family-Professional Partnership Scale, 87.8% (*n* = 1,324) of the participants completed each item in the scale. I was only able to impute data for 177 participants. From the Family-Professional Partnership Scale, I had 1,501 participants.

From those 1,501 participants, I proceeded to impute data for three other scales. For Activities of Daily Living, 75.1% (*n* = 1,128) of the participants completed each item in the ADL, so imputed data were needed for 308 participants. The remaining 65 participants completed less than 75% (11 items or less) of the scale. For the Advocacy and Knowledge Activities, 92.9% (*n* = 1,395) of the participants completed each item in the scale, 113 did not complete the full scale. I imputed data for 78 participants. Finally, for the BFI-10 personality inventory, 93.3% (*n* = 1,400) participants completed each item on the scale. I only imputed data for 96 participants.

For some of these scales data could not be imputed (because the participant completed less than 75% of the scale). Additionally, some other variables were also left unanswered by participants. Consequently, I excluded the remaining respondents with missing data. Thus, this study contains 1,004 participants.

I then compared the 1,004 participants in this study to rest of the participants (*n* = 1393). There were no significant demographic differences with respect to: income, marital status, educational background, and gender of the respondent. There are also no significant differences in relation to the gender of the child.

Distribution of variables. I then examined the distribution of the variables. Although the Child Subscale was not skewed, the Family Subscale distribution was moderately skewed. Both subscales indicated a negative kurtosis (the statistic for kurtosis was more than twice the standard error; Cohen, Cohen, West, & Aiken, 2003). Consequently, I used non-parametric statistics. To preserve the clarity and uniformity of this paper, I used non-parametric descriptive and inferential statistics for both the Child and Family subscale analyses. For dichotomous independent variables, then, I used Mann-Whitney U tests (i.e., a non-parametric variable, t-test); for multiple group, independent variables, I used the Kruskal-Wallis tests (i.e., a non-parametric, ranked variable, ANOVA); and for continuous independent variables, I used Spearman's Rho correlations. Because the mean and standard deviation of the subscale scores would also produce biased estimates, findings are presented in terms of the median (50% value) and the spread (25% and 75% values), which are robust to nonnormality.

I then calculated Spearman's rho correlations between the independent variables to determine their interrelations. I performed regression analyses including each of the eighteen variables. Independent variables that were highly correlated with other independent variables ($r > 0.7$) were not included in the regression. To assess the independent contribution of each of the independent variables in predicting the subscale scores, I performed ordinal regression analyses. This regression technique, which does not require an interval scale and makes no assumptions about the normality of the dependent variable, treats the dependent variable as ordered categories (Tabachnick & Fidell, 2007). For these data, ordinal regression is an appropriate regression technique.

Univariate Analyses

Univariate Analyses: Child Subscale. For the continuous independent variables, I ran Spearman's rho correlations. Because of the large size of the dataset, I examined both the degree of significance of the analyses as well as the size of correlations. For example, I considered both whether the analyses were significant at $p < .05$ as well as the magnitude ($r > .10$) of the correlations.

From this, it seems that the most powerful correlates (i.e., correlates that were significant a $p < .05$ and had correlations above .10) were Overall Satisfaction with Child Services, r (1004) = .68, $p < .001$, and Advocacy and Knowledge Activities, r (1004) = -.37, $p < .001$. Other independent variables include: age of the child, r (1004) = -.18, $p < .001$; asocial behaviors, r (1004) = -.17, $p < .001$; general behavior index, r (1004) = -.15, $p < .001$; mean severity of behavior problems, r (1004) = -.14, $p < .001$; externalized behaviors, r (1004) = -.13, p < .001, and (less) neurotic personality, r (1004) = .12, $p < .001$; and Internalized behaviors, r (1004) = -.11, $p < .001$. See Table 4.

Table 4

Correlates of Independent Variables with the Child Subscale

Characteristics	Median	25th percentile	75th percentile	Spearman's *r*	*p*
Overall service satisfaction				.68**	.001
Very dissatisfied (1)	25	19	31		
Neutral (3)	32	26	37		
Very satisfied (5)	36	30	41		
Advocacy scale				-.37**	.001
1st Quartile (8-15)	36	30	42		
2nd Quartile (16-23)	31	24	38		
3rd Quartile (24-31)	27	22	34		
4th Quartile (32-40)	23	18	30		
Age of child				-.18**	.001
3-6 years old	32	25	39		
7-10 years old	32	25	39		
11-14 years old	28	21	36		
15-18 years old	27	21	35		
Asocial				-.17**	.001
Normal	32	25	39		
Marginally serious	29	22	36		
Moderately serious	28	22	35		
Serious	26	21	34		
Very serious	22	17	25		
General behavior				-.15**	.001
Normal	31	24	39		
Marginally serious	29	22	35		
Moderately serious	28	21	35		
Serious	28	21	35		
Very serious	26	22	33		

Table 4 Continued

	Median	25th Percentile	75th Percentile	Spearman's *r*	*p*
Severity of behavior problems				-.14**	.001
Not (1)	31	24	38		
Moderately (3)	29	23	35		
Extremely (5)	26	20	35		
Externalizing				-.13**	.001
Normal	30	23	37		
Marginally serious	29	23	35		
Moderately serious	29	23	37		
Serious	28	25	35		
Very serious					
Personality: (Less) neurotic				.12**	.001
Disagree	24	18	33		
Neutral	29	23	35		
Agree	31	23	39		
Internalizing				-.11**	.001
Normal	31	23	38		
Marginally serious	28	23	36		
Moderately serious	28	22	37		
Serious	26	23	34		
Very serious	25	19	34		
ADL				-.09*	.005
1st Quartile (≤18)	34	30	42		
2nd Quartile (19-37)	30	23	38		
3rd Quartile (38-55)	30	24	36		
4th Quartile (≥56)	26	19	35		
# Behavior problems				-.09*	.005
0-2 behavior problems	30	23	38		
3-5 behavior problems	30	23	36		
6-8 behavior problems	28	23	35		

Table 4 Continued

	Median	25th Percentile	75th Percentile	Spearman's *r*	*p*
Personality: Extroverted				.07*	.019
Disagree	25	20	32		
Neutral	28	36	22		
Agree	34	26	40		
Frequency behavior problems				-.07*	.037
Less than once a month	31	16	40		
1-3 times a month	31	23	37		
1-6 times a week	28	23	37		
1-10 times a day	27	21	36		
More than once an hour	27	21	36		
Personality: Conscientious				.04	.166
Disagree	26	21	37		
Neutral	29	22	35		
Agree	30	23	37		
Personality: Open				-.02	.632
Disagree	31	30	31		
Neutral	31	21	36		
Agree	29	23	37		

**Continuous variables were grouped into quartiles to generate medians (although the full scale was used in all significance tests).

I then ran Mann-Whitney U tests to examine whether the categorical variables were related to the child subscale. I first looked at the disability categories. With small effect sizes, I found that families of individuals with emotional disturbances (versus those without emotional disturbances) were significantly less likely to have positive family-school partnerships, *U* (1, 1004) = -2.72, *p* = .007, *ES* = .09; families of students with learning disabilities (versus those without learning disabilities) were also significantly less likely to have positive family-school partnerships, *U* (1, 1004) = -2.35, *p* = .019, *ES* = .07; and families of individuals with intellectual disabilities (versus those without intellectual disabilities) were more likely to have positive family-school partnerships, *U* (1, 1004) = -2.24, *p* = .025, *ES* = .07;. See Table 5.

Table 5

Disability Analyses Related to Child Subscale

	Median	25th Percentile	75th Percentile	Mann-Whitney *U*	*p*
Emotional disturbance				-2.72*	.007
Yes	26	20	34		
No	30	23	37		
Learning disability				-2.35*	.019
Yes	28	21	37		
No	30	24	37		
Intellectual disability				-2.24*	.025
Yes	32	24	39		
No	29	23	36		
Deaf/hearing impairment				-1.04	.297
Yes	32	25	37		
No	29	23	37		
Autism				-0.19	.850
Yes	29	23	37		
No	30	23	37		

I then ran analyses to examine the relationship between race and family-school partnerships. There was no significant difference between White and non-White families, U (1, 1004) = 0.91, $p = .364$.

I then ran Kruskal-Wallis tests for multiple group variables: placement, educational status of the parent, and frequency of communication between the parent and the school. There was not a significant relation between parental education and the Child Subscale, X^2 (4, N = 1004) = 1.31, $p = .860$. Regarding placement, more inclusive placements negatively related to the Child Subscale, X^2 (4, N = 1004) = 10.55, $p = .032$. Follow-up tests revealed a significant negative difference between spending 0-20% versus 81-100% of the time in the regular education classroom, U (1, 753) = -2.82, $p < .005$, $ES = .10$. Related to communication, there was a positive relation between frequent parent-school communication and the Child Subscale, X^2 (2, N = 1004) = 10.73, $p < .005$. Follow-up tests revealed a positive difference between daily vs. weekly communication, U (1, 827) = 3.11, $p < .002$, $ES = .11$, and daily vs. monthly communication, U (1, 522) = 2.30, = .021, $ES = .10$. See Table 6.

Table 6

Kruskal-Wallis Analyses for the Child Subscale

	Median	25th Percentile	75th Percentile	Kruskal-Wallis X^2	*p*
Parent-school communication				10.73*	.005
Monthly	29	23	35		
Weekly	29	22	36		
Daily	32	23	40		
Time in regular ed classroom				10.55*	.032
0-20%	30	24	39		
21-40%	32	26	37		
41-60%	32	24	37		
61-80%	31	24	36		
81-100%	27	36	22		
Parental education				1.31	.860
Some high school	23	20	40		
High school degree	31	22	40		
Some college	29	22	38		
4-yr college degree	30	23	37		
Graduate school	30	24	36		

Univariate Analyses: Family Subscale. Again, as in the child subscale, the most powerful correlates were Overall Satisfaction with Child Services, *r* (1004) = .62, *p* < .001 and Advocacy and Knowledge Activities, *r* (1004) = -.40, *p* < .001. Other independent variables which significantly correlated with the Family Subscale included: asocial behaviors, *r* (1004) -.15, *p* < .001; age of the child, *r* (1004) = -.13, *p* < .001; general behavior index, *r* (1004) = -.13, *p* < .001; mean severity of behavior problems, *r* (1004) = -.13, *p* < .001; (Less) neurotic personality, *r* (1004) = .12, *p* < .001; Externalized behaviors, *r* (1004) = -.11, *p* < .001; and Internalized behaviors, *r* (1004) = -.10, *p* < .001. See Table 7.

Table 7

Correlates of Independent Variables with the Family Subscale

Characteristics	Statistics				
	Median	25th percentile	75th percentile	Spearman's *r*	*p*
Overall service satisfaction				.62**	.001
Very dissatisfied	26	19	31		
Neutral	32	26	37		
Very satisfied	39	35	43		
Advocacy scale				-.40**	.001
1st Quartile (8-15)	39	35	44		
2nd Quartile (16-23)	36	30	42		
3rd Quartile (24-31)	32	25	38		
4th Quartile (32-40)	25	19	35		
Asocial				-.15**	.001
Normal	36	29	42		
Marginally serious	34	27	40		
Moderately serious	34	25	39		
Serious	33	24	39		
Very serious	30	24	35		
Severity of behavior problems				-.13**	.001
Not (1)	36	29	42		
Moderately (3)	34	27	39		
Extremely (5)	32	25	39		
General behavior				-.13**	.001
Normal	36	29	42		
Marginally serious	34	27	39		
Moderately serious	33	25	39		
Serious	33	26	41		
Very serious	33	25	41		

Table 7 Continued

	Median	25th Percentile	75th Percentile	Spearman's *r*	*p*
Age of child				-.13**	.001
3-6 years old	36	30	42		
7-10 years old	36	29	42		
11-14 years old	34	26	39		
15-18 years old	33	26	39		
Personality: (Less) Neurotic				.12**	.001
Disagree	30	23	36		
Neutral	34	27	39		
Agree	36	28	42		
Externalizing				-.11**	.001
Normal	35	28	41		
Marginally serious	34	27	39		
Moderately serious	36	27	42		
Serious	34	27	42		
Very serious	24	18	31		
Internalizing				-.10**	.001
Normal	36	28	42		
Marginally serious	35	26	40		
Moderately serious	34	26	41		
Serious	34	28	39		
Very serious	30	21	41		
Personality: Extroverted				.09*	.003
Disagree	30	22	37		
Neutral	34	26	40		
Agree	37	32	43		
# Behavior problems				-.08*	.008
0-2 behavior problems	36	28	41		
3-5 behavior problems	35	27	41		
6-8 behavior problems	35	26	40		

Table 7 Continued

	Median	25th Percentile	75th Percentile	Spearman's *r*	*p*
ADL				-.07*	.041
1st Quartile (≤18)	38	35	44		
2nd Quartile (19-37)	36	27	41		
3rd Quartile (38-55)	35	28	41		
4th Quartile (≥56)	32	25	40		
Personality: Conscientious				.05	.143
Disagree	33	25	38		
Neutral	35	27	40		
Agree	35	28	41		
Frequency behavior problems				-.04	.219
Less than once a month	31	23	42		
1-3 times a month	35	27	41		
1-6 times a week	35	27	40		
1-10 times a day	34	28	41		
More than once an hour					
Personality: Open				-.01	.963
Disagree strongly (1)	35	27	41		
Disagree a little (3)	35	20	40		
Agree a little (5)	36	31	41		
Agree strongly (7)	34	27	41		

**Continuous variables were grouped into quartiles to generate medians (although the full scale was used in all significance tests).

I then ran Mann-Whitney U tests to examine differences in relation to the types of disabilities. Families of individuals with emotional disturbances were significantly less likely to have positive family-school partnerships, *U* (1, 1004) = -2.93, *p* < .003, *ES* = .09, as were families of students with learning disabilities, *U* (1, 1004) = -2.85, *p* < .004, *ES* = .09. Families of individuals with intellectual disabilities were significantly more likely to have positive family-school partnerships, *U* (1, 1004) = -2.39, *p* = .017, *ES* = .08. See Table 8.

Table 8

	Median	25th Percentile	75th Percentile	Mann-Whitney U	*p*
Emotional disturbance				-2.93*	.003
Yes	31	24	39		
No	35	28	41		
Learning disability				-2.85*	.004
Yes	34	26	40		
No	36	28	41		
Intellectual disability				-2.39*	.017
Yes	36	29	42		
No	35	27	41		
Deaf/Hearing impairment				-0.15	.880
Yes	35	27	41		
No	35	27	41		
Autism				-0.12	.908
Yes	35	27	41		
No	35	28	41		

Disability Analyses Related to the Family Subscale

I then ran analyses to examine the relationship between race and family-school partnerships. There is no significant difference between White and non-White families, U (1, 1004) = -.52, p = .602.

I ran Kruskal-Wallis analyses for the following group independent variables: placement, education of the parent, and frequency of communication between the parent and the school. Parent-School communication positively related to the Family Subscale, X^2 (2, N = 1004) = 7.16, p = .028. Follow-up analyses revealed significant differences between daily vs. weekly communication, U (1, 826) = 2.62, p = .009, ES = .09. There was also a negative relation between placement and the Family Subscale, X^2 (1, N = 1004) = 10.73, p = .030. Follow-up analyses revealed a significant negative difference between 0-20% versus 81-100% of time in the regular education class, U (1, 753) = -2.85, p = .004, ES = .10 and 21-40% versus 81-100%, U (1, 447) = -2.04, p = .042, ES= .10. There was not a significant relation between education of the parent and the Family Subscale, X^2 (4, N = 1004) = 2.29, p = .684. See Table 9.

Table 9

Kruskal-Wallis Analyses for the Family Subscale

	Median	25th Percentile	75th Percentile	Kruskal-Wallis X^2	*p*
Parent-school communication				7.16*	.028
Monthly	35	29	40		
Weekly	34	27	40		
Daily	36	28	43		
Time in regular ed classroom				10.73*	.030
0-20%	36	28	42		
21-40%	36	29	41		
41-60%	35	29	41		
61-80%	36	29	41		
81-100%	34	26	40		
Parental education				2.29	.683
Some high school	22	19	40		
High school degree	37	27	42		
Some college	35	27	41		
4-yr college degree	35	28	41		
Graduate school	35	40	28		

Correlation Matrix

Only variables with correlations greater than .70 were excluded from further analyses. In examining the inter-relations between the independent variables, the only correlations greater than .7 were items and subscales related to the SIB-R. As such, I used the General Maladaptive Index instead of individual behavior items. Furthermore, there were no significant correlations (*r* > .70) between the type of disability and other independent variables. There was also not a significant correlation between race and other independent variables. The Variable Inflation Factor for each independent variable was below 2.5, further indicating a low concern for multicollinearity (Cohen, Cohen, West, & Aiken, 2003). See Table 10.

Table 10

Spearman's Rho Correlation of Independent Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	---																
2	.08	---															
3	.12	-.02	---														
4	.14	-.11	.59	---													
5	.10	-.18	**.61**	**.61**	---												
6	.32	-.13	**.85**	**.86**	**.81**	---											
7	.10	-.17	**.79**	**.77**	**.80**	**.93**	---										
8	.01	-.20	-.02	.27	.28	.19	-.02	---									
9	.11	-.04	.41	**.64**	.49	**.63**	.35	.36	---								
10	.16	.33	.22	.06	.13	.09	-.05	-.06	.04	---							
11	-.02	.05	-.01	.02	-.03	.01	-.02	.02	.06	-.01	---						
12	.05	.45	-.11	-.10	-.19	-.14	-.15	-.13	-.01	-.05	.07	---					
13	-.07	.25	-.04	-.06	-.14	-.10	-.14	-.09	-.03	.20	.08	.18	---				
14	-.33	-.03	-.15	-.19	-.15	-.17	-.12	-.06	-.13	-.22	-.05	-.05	-.07	---			
15	-.04	.01	-.09	-.15	-.08	-.14	-.14	.05	-.10	.08	.01	-.06	-.02	.11	---		
16	.07	.01	-.10	-.11	-.07	-.11	-.11	.01	-.06	-.02	-.02	.02	-.08	.06	.10	---	
17	-.09	-.03	-.12	-.14	-.10	-.15	-.12	-.05	-.10	-.05	.06	-.02	-.02	.03	.28	.10	---
18	.12	.08	-.01	-.04	-.01	-.03	-.03	-.01	-.03	.08	.01	-.02	-.04	-.03	.18	.32	.17

**All correlations above .06 indicate $p < .05$ and all correlations above .09 indicate $p < .01$

Index: 1. Advocacy and Knowledge Activities, 2. ADL, 3. Externalizing Behaviors, 4. Asocial Behaviors, 5. Internalizing behaviors, 6. Behavior Index, 7. Number of behavior problems, 8. Frequency of Behavior Problems, 9. Severity of Behavior problems, 10. Age of Child, 11. Education of Parent, 12. Placement, 13. Parent-School Communication, 14. Satisfaction with services, 15. Less neurotic, 16. Extroverted, 17. Conscientious, 18. Open

Ordinal Regression

All variables were included in each regression: (1) Advocacy and Knowledge Activities; (2) placement of the child; (3) age of the child; (4) communication between the family and the school; (5) general maladaptive index; (6) (less) neuroticism of the parent; (7) extroversion of the parent; (8) openness of the parent; (9) conscientiousness of the parent; (10) race of the parent-white versus non-white; (11) Activities of Daily Living Scale; (12) satisfaction with services; (13) presence/absence of an intellectual disability; (14) presence/absence of an emotional disability; (15) presence/absence of a learning disability; (16) presence/absence of deafness/hearing impairment; (17) presence/absence of autism; and (18) educational level of the parent. The regression model was significant ($p < .001$) and explained 49.9% of the variance. The only significant predictors were: advocacy and knowledge activities, satisfaction with services, and communication between the parent and the school. See Table 11.

Table 11

Regression for Child-Subscale

	Estimate	Standard error	Wald χ^2	*p*	Odds Ratio	95% confidence interval
Satisfaction with services	1.51	.08	409.88	.001	4.53	3.91-5.24
Advocacy and knowledge	-.053	.01	35.84	.001	.95	.93-.97
Communication	.18	.09	4.40	.036	1.20	1.01-1.42
Maladaptive behavior index	-.01	.01	.26	.611	1.00	.99-1.01
Personality: (Less) Neurotic	.07	.05	2.19	.139	1.07	.98-1.18
Personality: Extroverted	.06	.04	2.94	.086	1.07	.99-1.15
Personality: Conscientious	.01	.05	.05	.824	1.01	.91-1.13
Personality: Openness	.05	.07	.54	.462	1.05	.92-1.21
Activities of daily living	-.01	.01	1.37	.241	.99	.98-1.00
Age of child	-.01	.02	.02	.903	.99	.97-1.03
Placement of the child	-.03	.04	.55	.460	.97	.91-1.05
Intellectual disability	-.01	.16	.01	.930	.99	.72-1.35
Autism	-.06	.13	.20	.653	.94	.73-1.22
Emotional disturbance	.08	.20	.16	.694	1.08	.73-1.59
Learning disability	.04	.13	.07	.791	1.04	.79-1.35
Hearing impairment	-.13	.28	.21	.646	.88	.51-1.52
Race	.20	.18	1.17	.279	1.22	.85-1.75
Parent education	.07	.06	1.13	.288	1.07	.95-1.20

For the family-subscale regression, I, again, included all of the independent variables. The regression model was significant ($p < .001$) and explained 44.5% of the variance. From the regression, the only significant predictors were: advocacy and knowledge activities, satisfaction with services, and parents’ extroverted personality type. See Table 12.

Table 12

Regression for Family-Subscale

	Estimate	Standard Error	Wald X^2	p-value	Odds Ratio	95% Confidence Interval
Satisfaction with services	1.22	.07	302.19	.001	3.38	2.95-3.88
Advocacy and Knowledge	-.08	.01	71.82	.001	.93	.91-.94
Personality: Extroverted	.11	.04	8.60	.003	1.12	1.04-1.20
Parent-School	.11	.09	1.63	.201	1.12	.94-1.32
Maladaptive behavior index	.01	.01	.14	.704	1.00	.99-1.01
Personality: (Less) Neurotic	.06	.05	1.53	.216	1.06	.97-1.17
Personality: Conscientious	-.01	.05	.01	.907	.99	.89-1.10
Personality: Openness	.07	.07	.89	.345	1.07	.93-1.23
Activities of daily living	.01	.01	.09	.759	1.00	.99-1.01
Age of child	-.01	.02	.03	.857	.99	.97-1.03
Placement of child	-.04	.04	1.41	.235	.96	.89-1.03
Parent Education	.06	.06	1.10	.295	1.07	.95-1.20
Learning Disability	.15	.13	1.24	.266	1.16	.89-1.51
Deaf/Hearing Impairment	.06	.28	.05	.832	1.06	.61-1.84
Intellectual Disability	-.13	.16	.63	.429	.88	.64-1.21
Autism	-.01	.13	.01	.945	.99	.77-1.28
Emotional Disturbance	.31	.20	2.46	.117	1.36	.92-2.02

Post-Hoc Analyses

Because one of the largest predictors of family-professional partnerships was Advocacy and Knowledge Activities, I decided to look at this scale more closely. While each of the eight items were significantly correlated ($p < .001$) with both the Child and the Family Subscales, three of the items were especially strongly correlated (r's > .30) with the subscales. These three items were: (1) used an advocate/attorney to attend an IEP meeting ($r = -.34$ for the Child Subscale, $r = -.37$ for the Family Subscale), (2) called an agency to ask about your special education rights ($r = -.35$ for the Child Subscale, $r = -.36$ for the Family Subscale), and (3) searched the internet for your special education rights ($r = -.36$ for the Child Subscale, $r = -.36$ for the Family Subscale). In all cases, parents who more often engaged in advocacy activities had lower levels of partnership with the school, on both the child and family subscales. See Table 13.

Table 13

Spearman's Rho Correlations of items of the Advocacy and Knowledge Activities

Items from Advocacy and Knowledge Activities Scale	Child Subscale	Family Subscale
Used an attorney/advocate to attend an IEP meeting	-.34**	-.37**
Had someone else (not an advocate) attend an IEP meeting	-.15**	-.19**
Attended a workshop on your special education rights	-.13**	-.16**
Had difficulty reading and understanding your special education rights	-.17**	-.23**
Called an agency to ask about your special education rights	-.35**	-.36**
Searched the internet for your special education rights	-.36**	-.36**
Read a copy of your special education rights or procedural safeguards	-.23**	-.23**
Talked with another parent about your special education rights	-.24**	-.24**

Given the connections between greater parental advocacy activities and weaker family-school partnerships, the issue arises of direction of effects. Simply stated, do more assertive parents "elicit" less close school partnerships, or do less close family-school partnerships "elicit" parents to become more assertive in learning their educational rights? Although, as this is a cross-sectional study, we cannot know for certain, analyses across categories of student age might still be instructive.

Thus, I next looked more closely at student age and both overall and individual items of the Advocacy and Knowledge Activities Scale. Comparing four-year age groups and Advocacy and Knowledge Activities overall scores, parental knowledge –advocacy increased as the student aged, Kruskal-Wallis X^2 $(3, N = 1004) = 23.90, p < .001)$. The largest changes occurred from the 3-6 year old period compared to each of the older periods, with parents more often seeking knowledge and advocacy as the child ages; 3-6 years old versus 7-10 years old, U (475) = -2.12, *p* = .034; 3-6 year olds versus 11-14 year olds, U (464) = -3.19, *p* < .001; and, 3-6 year olds versus 15-18 year olds, U (394) = -4.75, *p* < .001. These changes also exist in individual items. See Table 14.

Table 14

Kruskal-Wallis X^2 *Analyses of age and Advocacy and Knowledge Activities*

	Median Scores					
Item	A (3-6 years)	B (7-10 years)	C (11-14 years)	D (15-18 years)	X^2	Follow-up
Overall Advocacy and Knowledge Activities	19	22	22	24	23.90**	A<B, C, D**
Used an attorney/advocate	1	1	2	2	37.40**	A<B, C, D** B<D** C<D**
Had someone else attend IEP meeting	2	2	2	2	3.04	
Attended a workshop	2	3	3	4	28.96**	A<B, C, D** B<D** C<D**
Had difficulty reading procedural safeguards	2	2	2	2	2.21	
Called an agency to find out about special education rights	2	2	2	2	13.53**	A<B, C, D**
Searched the internet for special education rights	3	4	4	4	9.03*	A<B, C, D**
Read a copy of SPED rights	3	4	4	4	12.64**	A<B, C, D** C<D**
Talked with another parent	4	4	4	4	15.38**	A<B, C, D* B<D**

* *p* < .05, ** *p* < .001

CHAPTER IV

DISCUSSION

While the importance of family-school partnerships is recognized by legislation, very little research exists regarding what constitutes a positive family-school partnership in special education. To date, most research about family-school partnership relies on qualitative data (Summers et al., 2005a). The few scales that gauge family-school partnership quality either use measures that are psychometrically weak or are geared to parents of students receiving early intervention services (Summers et al., 2005a). As one of the first studies to use a national sample of parents of students with disabilities, this study provides important insight for researchers, practitioners, and policymakers. The implications of this study shed light on directions for future research in family-school partnerships in special education.

This study had four main results. The first indicated that the degree of satisfaction with special education and related services was positively correlated with family-school partnerships. Throughout the univariate analyses, satisfaction with services was consistently the largest factor to positively relate to family-school partnerships ($r = .68$ for the Child Subscale, $r = .62$ for the Family Subscale). This finding confirms prior research (Summers et al., 2005b; 2007) that satisfaction with services positively and strongly relates to family-school partnerships.

In addition to stronger family-school partnerships, increased satisfaction with services affects families in other ways. Increased satisfaction with services leads to improved family quality of life (Summers et al., 2007) and increased family empowerment (Thompson, et al., 1997). Conversely, dissatisfaction with services relates to increased parental stress (Sloper & Turner, 1992). This study adds to the literature by identifying yet another implication of high parent satisfaction with services: strong family-school partnerships.

A second finding related to the frequency of communication between the parent and the school. In univariate and regression analyses, increased parent-school communication related to more positive family-school partnerships. More specifically, the follow-up tests revealed that daily (compared to weekly and monthly communication) positively related to family-school partnerships.

This finding reinforces the importance of parent-school communication. Previous studies have documented that parents desire more frequent communication with school personnel (Angell et al., 2009; Esquivel et al., 2008; Hammond et al., 2008; Munn-Joseph & Gavin-Evans, 2008; Stoner et al., 2005). Furthermore, in one study, when parents were asked for ways to improve IEP meetings, 71% of all responses related to communication (Denton, 1983). More frequent communication between the parent and the school does indeed seem to positively relate to family-school partnerships.

Characteristics related to the parent (i.e., personality) also related to family-school partnerships. For example, increased extroversion related to more positive family-school partnerships. When parents are honest, participatory, and extroverted at special education meetings, schools feel they are active participants in family-school partnerships (Williams, 2007). Because parents who are more extroverted are more willing to share and actively participate in special education meetings, they may be deemed more equal partners in the family-school partnership.

This study's finding regarding the positive relation between parent extroversion and family-school partnerships reflects the wider parent literature of children with disabilities. The wider parent literature describes two coping styles of parents of children with disabilities: problem-focused coping and emotion-focused coping (Folkman, 1984). Problem-focused coping entails strategies to resolve a stressful situation, whereas emotion-focused coping relies on behavioral strategies to manage stress but not directly resolve the problem (Kim, Greenberg, Seltzer, & Krauss, 2003). Studies have found that parents who have problem-focused (versus emotion-focused) coping styles have improved well-being and decreased depressive states (Seltzer, Greenberg, & Krauss, 1995; Patrick & Hayden, 1999). This study extends the importance of parents being extroverted and possessing "can-do" attitudes to include managing potentially stressful partnerships with the school.

The fourth main result related to the Advocacy and Knowledge Activities scale, which correlated negatively with both subscales of the Family-Professional Partnership Scale ($r = -.37$ for the Child Subscale, $r = -.40$ for the Family Subscale). This result leads one to question the direction of effects: Does increased special education knowledge and advocacy lead to worse family-school partnerships? Or, alternatively, does a poor family-school partnership lead parents to gain special education knowledge and advocacy?

Because this dataset is cross-sectional, this question cannot be definitively answered. However, these data do provide some insight. As shown in Table 8, there is a small, positive correlation ($r = .16$) between the child's age and special education knowledge and advocacy skills. This correlation indicates that, as the child ages, parents engage in more advocacy and knowledge activities. Furthermore, in follow-up analyses using the overall scale and specific items on the scale, significant differences emerge in the degree of advocacy and knowledge activities from child's age of 3-6 years old to all other later ages of the child. Notably, in special education, age 6 is typically referred to as the end of early childhood for a student (Dunst, Johanson, Trivette, & Hamby, 1991). Because early childhood (compared to elementary and secondary school periods) tends to have more family-centered practices (Dunst, 2002), it makes sense that family-school partnerships may weaken from age 6 and on. From these analyses, it appears that initially poor family-school partnerships may lead parents to increasingly participate in special education advocacy and knowledge activities.

Another result related to the Advocacy and Knowledge Activities Scale itself. First, from both Cronbach's alpha and factor analysis, this scale holds together as a unitary construct. When one looks closely at the individual item, however, each of the items is an action. From this scale, we know only the frequency with which parents sought to learn their rights; we do not know what kind of knowledge the parent possesses. For example, one question in the scale is "How often have you attended a workshop on your special education rights?" From this question, we know the frequency with which a parent attended special education rights trainings, but we do not know what kind of information was presented at these trainings, whether or not the parent retained the information, and whether it was accurate information.

A final more general result related to the strength of student, parent, and school factors as characteristics related to family-school partnerships. From the regression analyses, the characteristics that most related to family-school partnerships existed at the level of the school (satisfaction with services and parent-school communication), and of the parent (personality type and Advocacy and Knowledge Activities). In essence, then, family-school partnerships are not solely strong or weak because of the school or the parent's efforts individually, but rather because of the combined effect of the efforts of both. Because of the various influences upon family-school partnerships and the different sources of these influences, family-school partnerships seem to be multi-dimensional and complex.

Implications for Researchers, Practitioners, and Policymakers

Implications for researchers. In looking toward future research, more studies are necessary to understand special education knowledge and advocacy. To discern what a parent needs to know about the special education system to foster a collaborative family-school partnership, we need an instrument which gauges the degree and depth of a parent's knowledge of their special education rights. In addition to special education knowledge, an instrument should also be created to understand the kind of advocacy skills a parent needs to cultivate strong family-school partnerships. This study demonstrates that special education knowledge and advocacy negatively relates to family-school partnerships. Future research should delineate what kind and amount of knowledge, as well as what kind of advocacy skills, are needed to significantly affect family-school partnerships.

Also in relation to special education knowledge and advocacy, future research needs to examine the sequence of the relation between advocacy and knowledge activities and family-school partnerships. Future research should determine whether the increased advocacy of the parent leads to worse family-school partnerships or, alternatively, whether worse family-school partnerships lead parents to become more educated consumers of special education. For example, when a parent brings an advocate to an IEP meeting, do school personnel become less collaborative and, subsequently, the family-school partnership weakens? Or, is the family-school partnership already weak, thereby prompting the parent to retain an advocate? More research is necessary to understand the direction of effects underlying the relationship of family-school partnerships and parent special education knowledge and advocacy.

Future research should also examine why early childhood (ages 3-6) compared to later years marks a changing point in parent advocacy efforts. Prior research has documented that families of students in early childhood have more family-centered programs (Dunst, 2002). It remains unclear, however, how family-centeredness decreases over time. Does the IEP team become less interested with parental concerns? Future research should more closely examine how family-school partnerships change when the child turns six.

In examining the need for additional research, it is clear that future research needs to be longitudinal. Specifically, longitudinal studies are needed to understand the role the age of the child has upon various factors (e.g., special education knowledge and advocacy of the parent) and, consequently, how those factors affect family-school partnerships. Longitudinal research will also shed light on how child, family, and school factors change with time and, consequently, affect family-school partnerships. Because family-school partnerships are dynamic and multi-faceted, it is necessary to examine these partnerships over the course of time.

Implications for practitioners. This study also has implications for practitioners. For example, practitioners should recognize the significant relation between parental satisfaction with related services and strong family-school partnerships. Parents who are satisfied with the frequency and quality of related services (e.g., speech and language therapy, occupational therapy) experience positive family-school partnerships. The services of related service providers and families' satisfaction with those services are essential for positive family-school partnerships. Consequently, an emphasis should be placed on service providers attending IEP meetings, communicating with the families, and providing quality services.

Another implication for practitioners relates to parent-school communication. From this study, parents who had daily communication with the school had more positive family-school partnerships. Furthermore, from the follow-up analyses, there is a significant difference between daily and weekly communication with daily communication positively relating to family-school partnerships. Based upon this finding, practitioners should find ways to communicate with families on a daily basis. For example, teachers can communicate to parents using a daily notebook. Alternatively, teachers can communicate to parents via phone calls. Practitioners need to find ways to provide frequent communication with parents.

Implications for policymakers. Finally, this study has important implications for policymakers. As IDEA continues to be reauthorized, it is important to continue to strengthen the mandate of family-school partnership. Unfortunately, IDEA does not provide clear guidance about how parents can be equal partners on IEP teams (Kalyanpur, Harry, & Skrtic, 2000). Based upon this study, policymakers may want to pass more specific legislation which clearly outlines the requirement for frequent parent-school communication. Policymakers may want to require IEPs to have a section detailing the frequency of communication that occurs between the parent and the school. Having clear expectations for parent-school communication may help ensure positive family-school partnerships.

Furthermore, as they train parents on their special education rights and represent families of students with disabilities in IEP meetings, policymakers may want to pay special attention to federal agencies (e.g., Parent Training and Information Centers and Protection and Advocacy agencies). Currently, the government funds 106 Parent Training and Information Centers and 50 Protection And Advocacy agencies across the country. Furthermore, in the United States the pool of special education attorney and advocates is growing (Burke, in press). Policymakers may want to look more closely at the training offered to families and how these trainings affect their family-school partnerships. In light of this study's findings, policymakers may want to look more closely at these agencies to understand what kind information and advocacy strategies they are imparting to parents of students with disabilities.

Limitations of Current Research

While this study provides an initial understanding of family-school partnerships, it also has certain limitations. Although this study had a large and national sample of parents of students with disabilities, the web-based format may have precluded participation from parents from low-income or minority backgrounds. A longstanding obstacle in research about families of individuals with disabilities is the difficulty in attaining culturally and linguistically diverse (CLD) participants (Harry, 2008). This study, too, has smaller samples of CLD participants. Future research may try to target these individuals to ensure they are proportionately represented.

A second limitation of this study is its cross-sectional nature. Due to the lack of longitudinal data, this study could not assess the direction of effects. For example, it is difficult to discern whether increased special education knowledge and skills occur first or as a result of poor family-school partnerships. Especially given that family-centered practices decrease as students age (Dunst, 2002), it is necessary to consider the age of the student when examining the relationship between the parent and the school (Summers, et al., 2005b).

Still, even considering these limitations, this study provides a jumping off point using a national dataset to examine the characteristics which relate to family-school partnerships. The results indicate the complicated and multi-dimensional nature of family-school partnerships. By identifying which child, parent, and school characteristics relate to partnerships, future interventions may be developed to target these characteristics thereby improving family-school partnerships. Based on this study, researchers, practitioners, and policymakers can work toward strengthening family-school partnerships on behalf of all students with disabilities.

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