

AN ABSTRACT OF THE THESIS OF

Cristian M. Dogaru for the degree of Master of Science in Human Development and Family Studies presented on October 13th 2004.

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Using Pianta and Walsh's (1996) Contextual Systems Model (CSM), this study analyzed parent involvement in school as a key element for transition to kindergarten for children with disabilities and their families, along with the practices schools employ to improve school-family collaboration. Focusing on the relationship between the school system and the family/child system, this research explored the parent involvement and the factors influencing it using the views of Hoover-Dempsey and Sandler (1995), Eccles and Harold (1996), and Smith et al. (1997). The study drew from the Early Childhood Longitudinal Study – Kindergarten Year of 1998-1999 (ECLS-K) a subsample of 1,016 children who have Individualized Education Programs (IEP). A profile of kindergarten-aged children with disabilities was created. School practices related to families were found to be low-intensity, formalized, and

poorly correlated in number with degree of parent involvement. Parent involvement was assessed using seven items from the parent interviews. The items measured whether or not a parent participated in parent involvement activities with the schools during the kindergarten year. A composite variable measuring the number of types of activities a parent was involved in during the kindergarten year was created and used in a Linear Regression. A second parent involvement variable measuring the total number of activities that parents reported was created and used in a second Linear Regression. Parent involvement was unbalanced; i.e., parents tended to become involved in some types of parent involvement activities, but not in all types, and they chose different types. Family demographics (education, language), other family characteristics (perceptions, expectations, involvement at home) were found to be significant predictors for parent involvement. These results are discussed, and recommendations are offered.

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Transition to Kindergarten for Children with Disabilities: School Practices and Parent
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by

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Transition to Kindergarten for Children with Disabilities: School Practices and Parent Involvement

CHAPTER I – INTRODUCTION

Transition to kindergarten is an important process in virtually all children's lives, with significant influences on children's school adjustment and future school success. Parent involvement in their children's education is a significant element of transition to kindergarten, important for both typically developing children and children with disabilities. Parent involvement is both a predictor for and an outcome of a successful transition to kindergarten (Pianta & Cox, 1999). It is then important to understand the nature of parent involvement in school and the factors influencing it, in order to be able to plan and achieve a successful transition to kindergarten program.

This study used the Early Childhood Longitudinal Study Kindergarten Class of 1998-1999 dataset (ECLS-K), which contains data from a nationally representative cohort of kindergarten-age children, their families, and their schools. First, the study developed a profile of the children with disabilities attending kindergarten during the 1998-1999 school year. Then it analyzed (a) the practices that schools employ to improve parent involvement at school and to ease the transition to kindergarten for children with disabilities, and (b) the factors predicting parent involvement for children with disabilities at the end of the kindergarten year.

Definition of Transition to Kindergarten

Kindergarten is a major life experience for virtually all children in the United States. Although not all states require attendance, about 98% of children attend kindergarten prior to their first grade year (Zill, 1999). Kindergarten is viewed as the

beginning phase of the school system in most American communities, and thus, for most children, it represents their first contact with the formal educational system. Transition to kindergarten is basically the process of moving the children and their families from the prekindergarten¹ environment to kindergarten (Bruder & Chandler, 1996). This process is complex. It involves changes in many aspects of life and is negotiated not only by the children but also by their families, their school, and the whole community (Bruder & Chandler, 1996; Ramey & Ramey, 1999; Rosenkoetter, Hains, & Fowler, 1994). It is a process that requires time, planning, and commitment (Pianta & Cox, 1999; Rosenkoetter, Hains, & Fowler, 1994). The success of transition to kindergarten depends on a comprehensive collaboration, cooperation, and communication among the parties involved (Bruder & Chandler, 1996; Fowler, Schwartz, & Atwater, 1991; Mangione & Speth, 1998).

Theoretical Framework

To explore transition to kindergarten for children with disabilities, this study used Pianta & Walsh's (1996) Contextual Systems Model (CSM). CSM views transition to kindergarten as a complex "system of systems" that develops and changes continuously across time. Among these systems are the family/child system and the school system, embedded within the suprasystems represented by the neighborhood, the community, and the culture at large. These systems are interrelated. This interrelation has a synergistic characteristic – it's more than simple the sum of the interactions between the subordinate systems. The interactions, over time, form patterns, create expectations, and begin to have a quality different from the initial interaction. They become relationships. One of

¹ The term prekindergarten includes all child care arrangements prior to kindergarten (preschool, Head Start, home care, or other arrangements), and it will be used with this meaning throughout the paper.

these important relationships occurs between the school system and the family/child system. Parent involvement in school is an important component of this relationship, influenced by and influencing the other systems.

Implications of Transition to Kindergarten

Transition to kindergarten involves change. The child and the family move from one setting to a different one. The differences are experienced at different levels, i.e., the environment, the curriculum, the expectations, and the interactions and relationships (Carta & Atwater, 1990; Fowler, Schwartz, & Atwater, 1991; O'Brien, 1991; Rosenkoetter, 1995; Vail & Scott, 1994). These differences are usually expected. However, the changes associated with transition to kindergarten can foster stress and uncertainty (Wolery, 1999), affecting the children's adjustment to the new educational environment.

For children with disabilities and their families transition to kindergarten is even more complex than for typically developing children. When disabilities are involved, participants may experience the transition to kindergarten differently from their typically developing peers. The differences between prekindergarten settings and kindergarten may be greater for them than for typically developing children (Katims & Pierce, 1995; Carta & Atwater, 1990). For many children with disabilities, transition to kindergarten coincides with transition from one service provider to another, and each is likely to have unique regulations and types of service delivery (Wolery, 1999).

The success of transition to kindergarten is related to children's later school success. For children, both those who are typically developing and those with disabilities, an important outcome of successful transition to kindergarten is school adjustment and

positive attitudes toward school (Love, Logue, Trudeau, & Thayer, 1992; Pianta & Cox, 1999; Pianta & Kraft-Sayre, 2003; Ramey & Ramey, 1999). For their families, one of the outcomes of a successful transition to kindergarten is an increased parent involvement in their children's education (Pianta & Cox, 1999).

Factors Influencing Transition to Kindergarten

The factors influencing transition to kindergarten can be found within all systems included in the CSM: the child, the family, the school, and the community (Maxwell and Eller, 1994). The strategies for facilitating the transition to kindergarten of children with disabilities should address all these factors. For the families, the transition efforts should focus on assessment of family concerns and employment of strategies for improving the parent involvement (Fowler, Schwartz, & Atwater, 1991). As discussed previously, a key component of a successful transition to kindergarten for all children (with and without disabilities) is parent involvement in their children's education (Christenson, 1999). Parent involvement is both a predictor and an outcome for a successful education (Pianta & Cox, 1999). Parent involvement is a strong predictor for children's school achievement (Henderson & Berla, 1994; Henderson & Mapp, 2002).

Parent Involvement

Parent involvement in children's education is defined in different way in the literature. However, researchers agree that there are basically two major types of parent involvement in children's education: school-related involvement and home-related involvement (Christenson, 1999; Ramey, Ramey, Phillips, Lanzi, Brezaussek, Katholi et al., 2000). Parent involvement at school - which is the main focus of this study - is a

component of a larger family-school relationship, defined as the interaction between the two systems of the theoretical framework of transition to kindergarten.

Several theoretical models for parent involvement have been proposed in the literature. The most important models are those suggested by Hoover-Dempsey and Sandler (1995), Eccles and Harold (1996), and Smith, Connel, Wright, Sizer, and Norman (1997). These theoretical models have different approaches and examine different aspects of parent involvement. However, they have many similarities and overlapping points as well. The factors that influence parent involvement are represented, according with the authors, by characteristics of the child, of the family (e.g., demographics, beliefs, and expectations), of the schools, and of the community.

This project proposed to use elements of these theoretical models to find the factors that predict parent involvement. The factors proposed as predictors for parent involvement were grouped, in this study, in three categories: (a) child factors (represented by age and gender), (b) family factors (family SES, family income, parent's education level, mother's ethnicity, language spoken at home, and family structure), and (c) parent characteristics related to child's education (parent's perception of opportunities offered by school, involvement at home, and parent expectation for child education). The more detailed literature review in the following chapter presents the rationale of using these factors as predictors for parent involvement.

CHAPTER II – LITERATURE REVIEW

Defining Transition to Kindergarten

Transition to kindergarten is a very important time in children's lives, important for both the children and their families (Mangione & Speth, 1998; Pianta & Cox, 1999; Pianta & Kraft-Sayre, 2003). The early years of education are critical for future academic and social outcomes. The kindergarten is typically the first contact with the educational system in which the child will spend the formative part of his or her life. Kindergarten transition is also a time for establishing competencies critical for later successful outcomes. Transition to kindergarten is a vertical type of transition, which means a transition from one setting to another across time, as opposed to horizontal transitions, which refer to the connections among home, school, and services at any given time (Mangione & Speth, 1998; Rosenkoetter, Whaley, Hains, & Pierce, 2001). Even though transition to kindergarten is anticipated with some anxiety and excitement by both children and their families, for the great majority of children this is a normative event (Fowler, Schwartz, & Atwater, 1991; O'Brien, 1991) with no negative impacts on later development. What makes transition important and influential in children's lives is the experience of transition itself, its ecology, and the foundational nature of this event for later school experience.

Although kindergarten is nearly a universal occurrence for children in the United States, the kindergarten experience is extremely heterogeneous. Whereas most children attend kindergarten in the same public school system in which they will later attend elementary school, other children attend kindergarten in a variety of private settings. Some children attend full-time programs, whereas other children attend half-day

programs. Children come to kindergarten from a range of different backgrounds and with a variety of characteristics: different ethnic and cultural backgrounds, different socioeconomic status, varying prekindergarten educational experiences, different skills and knowledge, different family backgrounds, and different personal characteristics and developmental needs (Zill, 1999), including the presence or the absence of a range of disabilities. For some children, especially children with disabilities, the transition to kindergarten can be a non-normative event (O'Brien, 1991), with important negative influences on their further development.

Transition to kindergarten can be defined in different ways. Simply stated, a transition is the process of moving from one program to another (Bruder & Chandler, 1996). Rosenkoetter, Hains, and Fowler (1994) identified six statements that contribute to the definition of transition: (a) transition is a lifelong process; (b) transitions are inevitable, (c) transition is a continuous process, (d) early transitions are significant, (e) transitions involve change, and (f) transitions are usually stressful (1996). Ramey and Ramey (1999) propose a definition in which transition to kindergarten is “an ongoing process that occurs during the first several years of life when children, families, and schools are making mutual adaptations to facilitate the eventual success of the child, family, and school in the early elementary school years” (p. 219). To encompass all these concepts in one phrase, the investigator proposes the following definition: *Transition to kindergarten is a continuous, inevitable process in virtually all children’s lives, a process that occurs usually around ages five or six and that has important effects on the child’s future school success. This process involves changes in many aspects of life. It is negotiated not only by the children but also by their families, their schools, and the whole*

community, which ideally work together to make possible the success of transition to kindergarten.

Models of Transition: Theoretical Framework

As simple as it sounds, the transition to kindergarten is difficult to conceptualize. There are various views regarding the transition to kindergarten. One view is that this transition is a onetime set of activities undertaken by the children and their families as they begin school (Kagan & Neuman, 1998). This is a child-focused approach to transition that sees it in terms of the skills and knowledge that the child brings with him or her on the first day of school. Perhaps this view expands to include the child's skills and abilities within the various social environments experienced by the child (Pianta & Kraft-Sayre, 2003). Other observers view transition as a set of ongoing efforts to create linkages between the child and his/her family on the one hand, and the environments, on the other (Kagan & Neuman, 1998). Pianta and Kraft-Sayre (2003) describe this approach as "the linked environment model," which includes, additionally to the child's skills and knowledge and the environments in which the child lives, the ways in which connections between the child's key settings (or the people in the key settings) can influence the child's adjustment to kindergarten.

The Contextual Systems Model

Origins

The most complete and complex theoretical model for transition to kindergarten is proposed by Pianta and Walsh (1996). This model, called the Contextual Systems Model (CSM), "draws heavily from Developmental Systems Theory (...) and sees development as framed by culture and history" (p. 63). In turn, Developmental Systems Theory,

developed by Ford and Lerner (1992), is based on von Bertalanffy's (1968) General Systems Theory (GST), representing an application of the concepts of GST on child development. The CSM focuses on a broad group of systems involved in the education of young children and "is sufficiently open to accommodate a wide variety of child-rearing and prekindergarten experiences for children as well as the wide range of schooling contexts and factors affecting schooling present in American public schools" (Pianta & Walsh, 1996, p. 63).

Components

For the model of transition to kindergarten, the systems that interrelate are, at the very base, the child/family system, the prekindergarten program system, and the school system. These are embedded within the suprasystems represented by the neighborhood, the community, and the culture at large. What is important is not only the mere existence of these relationships but also their characteristics and quality. The relationships are influenced by various factors: the parents' socioeconomic status and their educational and personal resources, the school's collaboration and communication with the parents and with other service providers, and in many ways, the societal and cultural norms (Pianta & Walsh, 1996). Thus, the transition to kindergarten is not an isolated point in time. Rather, it is a process negotiated between the child, the family, the school system, the prekindergarten programs, and the community (Pianta & Cox, 1999; Rosenkoetter, Hains, & Fowler, 1994), a process that requires time, planning, and commitment to nurture.

This theoretical framework for the transition to kindergarten strongly emphasizes that the key factors influencing, and being influenced by, the transition to kindergarten are found within the child/family and the prekindergarten/school systems, *as well as the*

relationships among these systems. Both the quantity and quality of these relationships matter. In this model the family-child system moves from a sender (the prekindergarten) to a receiver (the kindergarten). All actors involved play a role in the nature and outcomes of the child's transition to kindergarten. Of particular importance is the relationship between the parents (the family system) and the teacher (the school system), translated into the quantity and quality of parents' involvement with their children's school and the efforts the schools make to improve parental involvement and to create an effective school-family connection. The importance of parent involvement and its theoretical framework will be discussed later in this paper.

Implications of Transition to Kindergarten

What makes the transition to kindergarten inherently a transition? By definition, the term transition implies a change. Transition to kindergarten is moving from one thing to something different, that is, a new developmental stage, a new setting, a new psychological state, a new place, and a new set of relationships. While both the family and the child experience the changes of transition, they experience them differently.

Implications of Transition for the Child

The differences between prekindergarten settings and kindergarten are accentuated in our time by the downward extension of the curriculum and expectations from school to kindergarten, making the kindergarten more academic and "school like" than was true in the past (Kemp & Carter, 2000). Another source of differences between prekindergarten settings and kindergarten results because the diversity of prekindergarten settings is greater than the diversity of kindergarten settings. Prior to kindergarten, children can be in home care (in various arrangements such as parental or relatives' home

care, or non-relative child care). Alternatively, they may be in different types of out of home care such as preschool, child care, or Head Start. The amount of time spent in a prekindergarten setting can also vary considerably. These differences may have a strong impact on the child's approach to kindergarten.

Implications for Typically Developing Children

For the child, differences between kindergarten and prekindergarten may be experienced at different levels. Many authors (Carta & Atwater, 1990; Fowler, Schwartz, & Atwater, 1991; O'Brien, 1991; Rosenkoetter, 1995; Vail & Scott, 1994) have described the differences between prekindergarten and kindergarten. Their descriptions can be grouped in three categories or levels of differences. One level is (a) the environment, that is, physical settings, classroom sizes, adult/child ratios, and lengths of sessions that can be quite different between prekindergarten and kindergarten settings (Rosenkoetter, 1995). Another level is (b) curriculum, expectations, and evaluations; for example in kindergarten the curriculum is typically more academic and structured, and the expectations more group oriented and evaluative than in prekindergarten. The third level is (c) interactions and relationships with peers and teachers. The role of the teacher in kindergarten typically is to initiate, talk to the children as a group, direct children's behavior, encourage children's compliance, and organize activities for children, whereas in prekindergarten, activities are typically more child-directed.

These differences are usually expected. That makes transition to kindergarten a normative event in almost every child's life and in the family's life as well. However, the changes associated with transition to kindergarten can foster stress and uncertainty (Wolery, 1999), affecting the children's adjustment to the new educational environment.

The early years of education are critical for children's future academic and social outcomes (Pianta & Kraft-Sayre, 1999; Ramey & Ramey, 1998). Children who do not adjust well to the demands of the school "may set a pattern of failure that persists throughout their years in school and beyond" (O'Brien, 1991, p. 4). For the child, a successful transition, "is influenced by the skills and behaviors the child exhibits during transition and the match between child skills and behaviors and the expectations and requirements of the receiving program" (Bruder & Chandler, 1996, p. 298). Adjustment to school, including social, emotional, and academic adjustment (Pianta & Kraft-Sayre, 1999), is what makes the transition a successful or unsuccessful one for the child.

Implications for Children with Disabilities

Children with disabilities experience more transitions than do typically developing children. Many disabilities are identified at birth or in the first years of life. During infancy, children with identified disabilities or developmental delay are eligible for Early Intervention services under Part C of the Individuals with Disabilities Education Act (IDEA) of 1997 (PL 105-17). They receive home based services, center based services, or a combination of the above. If still eligible for special education services, these children undergo a transition at age three, from Part C of IDEA to Part B Section 619, prekindergarten services. This transition at age three can be challenging because it may involve changing service providers, who might have different regulations and types of service delivery (Bruder & Chandler 1996). Part B is under the auspices of public education, but many schools choose to locate their prekindergarten services for children with disabilities within community programs such as Head Start, state supported preschool programs, or child care. Then, at age five, these children with disabilities

experience a new transition as they move to kindergarten, not only by entering the formal school system, with all the changes that typically developing children experience, but also to the new special education and related services offered by the school system (Wolery, 1999).

For children with disabilities, the differences between prekindergarten and kindergarten can be even greater than those for typically developing children. Whether in community prekindergarten classes or special education prekindergarten settings (Odom, 2000), the children with disabilities usually receive more individual, one-to-one instruction in preschool than their typically developing peers (Katims & Pierce, 1995). Using ecobehavioral analysis to compare special education prekindergartens with kindergartens, Carta and Atwater (1990) found that in special education prekindergartens the children tend to spend more time at table activities, in small groups, and with more one-to-one interaction than is usual in community-based programs. In kindergarten, the children tend to spend more time in large groups and working independently than in either type of prekindergarten setting.

Implications for Families

The changes that families experience between prekindergarten and kindergarten are also important. According to Rimm-Kaufman and Pianta (1999), teacher-family contact occurs more frequently, is more informal, and is more positively oriented in prekindergarten than in kindergarten. Using a daily diary method of research with teachers from two prekindergartens and one kindergarten, the authors found that while the family-school contacts varied among different prekindergartens and kindergartens, reflecting varying program philosophies and priorities, teacher-family contact occurred

more frequently and the contact was more informal and more positive-content oriented in prekindergarten than in kindergarten. The authors conclude, “these data (...) show how the transition to kindergarten is associated with diminished success in engaging families in school” (p. 434). In kindergarten, the family-school relations become more formal and less intense, and the new kindergarten setting is likely to offer fewer opportunities for parent involvement. The parents need to adjust to new schedules and new routines, attend conferences, and locate and assess new services (Fowler, Schwartz, & Atwater, 1991).

According to Harry (2002), Rosenkoetter and Rosenkoetter (2001), and Wolery (1999), the families of children with disabilities face additional stressors and changes. These include meeting new service providers and developing relationships with them, as well as confronting questions about the availability of services and technologies, how the children will fit in the new school environment, and how the new teachers will treat their children. Some families worry about discrimination and rejection of their children, the location and duration of their children’s attendance, the special education label to be applied, or the means of transportation.

Pianta and Kraft-Sayre (1999) found that parents’ criteria for successful transition to kindergarten include (a) positive psychological responses by the child, (b) ongoing relationships with the school, (c) prekindergarten experience, (d) effective communication with the school, (e) well-done transition planning and transition activities, and (f) teacher and curriculum quality. Parental concerns about transition are correlated with children’s behavioral and emotional problems that might not be handled very well by the teachers; i.e., school expectations for the children that are too high or too low and poor communication with the school in general. Other specific concerns of parents of

children with disabilities are related to riding a school bus, being safe on the playground, participating in the large group activities, following the rules and routines of the classroom, and following directions. The concerns increase with the severity of the disability especially in the areas of self-care, being able to communicate the child's needs, and receiving adequate services (Rosenkoetter & Rosenkoetter, 2001).

The transition to kindergarten has been found to be successful for families when the parents become more involved in their children's education, when they have increased self-esteem, increased confidence in school and in themselves as parents, increased expectations for their children, and increased social support. The transition to kindergarten is successful when parents are more empowered to work with their children's learning and to participate at school as well as when they become more skilled in the four parental roles that assure their children's success in school: teacher, supporter, advocate, and decision maker (Henderson & Berla, 1994).

Factors Influencing Transition to Kindergarten

Maxwell and Eller (1994) group the factors that can influence transition to kindergarten as follows: (a) children's skills and prior experience with prekindergarten (e.g., social skills, previous experience with peers, and prior experience with prekindergarten), (b) parental influences (e.g., parental expectations, parental management of children's social activities, and parent-child interactions), and (c) classroom and school characteristics (e.g., use of developmentally appropriate curriculum, perceptions of parents and teachers of skills needed for early school success).

The literature on transition to kindergarten is rich in recommended practices for assisting the transition to kindergarten. Generally there are two trends in the literature

regarding recommended practices for planning and implementing programs for transition to kindergarten (Katims & Pierce, 1995). One trend emphasizes factors outside the child. It focuses on practices for assisting the families of children in transition, either children with disabilities or typically developing children. This body of research studies the sender programs (prekindergarten) and the receiver programs (kindergarten), emphasizing factors such as preparation of the environment for the new children, information sharing, and program coordination. This research also addresses issues related to policies and practices at federal and state levels for agencies and programs. The second trend in recommended practices addresses the children themselves. It generally deals with practices related to preparing the children for the next environment and teaching them the *school survival skills*, on the sender program's side and/or supporting the children in the new environment (e.g., curriculum modification or physical environmental modification) on the receiver program's side.

For children with disabilities Bruder and Chandler (1996) observed that many programs did not adopt and implement formal measures meant to facilitate children's and families' transition in and out of their programs. Those programs that adopted such procedures regarding transitions often focus only on one aspect of the transition (e.g., the family, the child, or various administrative issues), failing to create a comprehensive transition program. The authors state that transition efforts should be comprehensive and should address multiple components. The transition efforts must involve formal planning, implementation, and follow-up (Bruder & Chandler, 1996).

Another framework for continuity and collaboration in the process of transition to school is presented by Mangione and Speth (1998). The authors found that there are eight

elements essential for a successful transition: (a) families as partners; (b) shared leadership; (c) comprehensive and responsive services; (d) culture and home language; (e) communication; (f) knowledge and skill development; (g) appropriate care and education; and (h) evaluation of partnership success.

The family, the prekindergarten, the school, and the community can positively influence transition to kindergarten in different ways: the family by preparing themselves and the child for school and by having positive expectations for the child's achievement; the prekindergarten by preparing the child and the family and by assuring communication and collaboration with the school; the school by offering possibilities for parent involvement, being receptive to parents' needs and concerns, and being supportive of the new students; and the community by supporting schools through taxation and by investing in libraries, summer educational programs, adult learning programs, and family recreational activities (Ramey & Ramey, 1998).

In accord with the Bruder and Chandler model, Fowler, Schwartz, and Atwater (1991) affirm that the strategies for facilitating the transition to kindergarten of children with disabilities should address the child, family, and service providers, i.e. educators and therapists. This model can be extended to all children, not only children with disabilities. For the family, according to Fowler et al. (1991), the transition efforts should focus on assessment of family concerns and employment of strategies for improving the parent involvement. For the service providers, a comprehensive set of facilitative transition procedures should be adopted, including (a) discussion of transition with families, (b) visit by the child and family to the new site, and (c) follow-up.

The perceptions of kindergarten teachers about practices for improving the outcomes of children with disabilities as they enter kindergarten are also important, and they can influence the transition to kindergarten. Vaughn, Reiss, Rothlein, & Hughes (1999) studied the perceptions of kindergarten teachers about the desirability and feasibility of “practices identified to enhance the outcomes for children with disabilities as they make the transition from their prekindergarten program to kindergarten” (p. 184).

The authors found that, generally, kindergarten teachers find most of the recommended transition practices more desirable than feasible. The authors developed a scale specifically designed to measure the desirability and the feasibility of making modifications in their classrooms for children with disability. The scale, called “Adaptations for Kindergarten Children with Disabilities” (AKCD), was created after an extensive search and integration of the literature, as well as consultation with other researchers. The AKCD consists of five areas of kindergarten teachers’ actions. The last area is working with family and support staff, such as “educate parents about developmentally appropriate education,” “communicate with special education teachers and other professionals,” “learn about support services to inform parents,” “meet with parents and child prior kindergarten,” “learn about child’s cultural perspective and family goals,” “learn about special equipment use,” and “establish routine of communication with parents” (Vaughn, Reiss, Rothlein, & Hughes, 1999, p. 188). The authors found that, with the exception of one item (“maintaining portfolios”), the kindergarten teachers consider these practices desirable and acknowledge the need for them, but they consider that the implementation of them is less feasible. If teachers find these practices less feasible, this might influence in a negative way their practices for easing transition to

kindergarten. The teachers will be less motivated to put in practice these practices, even if they are part of the school policies and if teachers are less encouraging of specific forms of parent involvement, then parents may demonstrate less involvement.

Parent Involvement

Importance of Parent Involvement

Parent involvement in children's education emerges as being the key component for transition to kindergarten and future school success. Parent involvement is both an outcome for a successful transition to kindergarten and a predictor for a good transition (Henderson and Berla, 1994), and it constantly appears as an important component of all the program models and recommended practices regarding transition to kindergarten presented above.

Parent involvement is an important element not only for transition to kindergarten but also for future child's school achievement. Henderson and Berla (1994), after an extensive literature review, conclude, "The evidence is now beyond dispute. When schools work together with families to support learning, children tend to succeed not only in school, but throughout life" (1994, p. 1). The authors found that the best predictors for student achievement in school are (a) families creating a home environment that encourages learning, (b) parents becoming involved in their child's education both at school and in the community, and (c) parents having high expectations for children's achievement and future careers. The authors find that several major themes emerge from the literature regarding parent involvement: (a) the family is the critical predictor of student achievement, considering both the learning experiences it provides and the expectations it has for their children, (b) when parents are involved in children's learning

at school as well as at home, the children's outcomes are better than when parents are not involved, (c) children do best when their parents "are enabled to play four key roles in their children's learning: teachers, supporters, advocates, and decision-makers" (p. 15), (d) student achievement is higher when the family-school relationship is of comprehensive, partnership-type, (e) the best results in student achievement come when the children, the families, and the community work together (Henderson & Berla, 1994). These initial findings are supported by a more recent report of Henderson and Mapp (2002). As Hoover-Dempsey and Sandler (1995) say, "parent involvement is most accurately characterized as a powerful enabling and enhancing variable in children's educational success" (p. 319).

Types of Parent Involvement

Parent involvement, as a concept, is defined and studied in different ways, but generally parent involvement in the child's education is said to consist of three groups of activities or behaviors: (a) extracurricular involvement, like reading to the child, writing with the child, or going to the library; (b) schoolwork involvement, such as helping with homework or discussing the child's day at school; and (c) at-school involvement, like volunteering, participating in meetings and conferences, and helping with field trips (Baker, Kessler-Sklar, Piotrkowski, & Lamb Parker, 1999). These three groups can be collapsed into two major types of parental involvement: school-related involvement and home-related involvement (Christenson, 1999; Ramey, Ramey, Phillips, Lanzi, Brezausek, Katholi et al., 2000). These two types of parent involvement have been intensely studied, but the terms have sometimes been confused or superimposed and the conceptualization of parent involvement has varied from study to study. However, the

overall findings are in significant agreement: parent involvement in children's education has a major effect on future school achievement and is an important component of a successful transition to kindergarten.

Parent Involvement at School

Parent involvement at school is a component of a larger family-school relationship, defined as the interaction between the two systems of the theoretical framework of transition to kindergarten. There are two general approaches to family-school connection (Christenson, 1999). The first approach, the most commonly used, involves parents in ways that address the school's agenda. Parents are seen as desirable to participate in specific situations and are called upon when the school needs help. Teachers perceive that parents and educators have separate, distinct roles. Contacts are formal and ritualized. The second approach features partnership between families and school personnel. It is characterized by shared responsibility and an emphasis on relationships, not only on meeting the school's needs. In this approach family-school collaboration is an attitude, not an activity. Learning, the result of education, is a product not of the school but of children who create it with the help of educators, families, and the community, according to Christenson.

Parent Involvement at Home

Parent involvement at home represents, according to Epstein (1992), creating a home environment that supports learning and development. This includes positive and rich parent-child interaction, reading to the children, visiting a library or a museum, helping with homework, and generally monitoring and assisting children at home. Generally most parents want to know how to help their children at home, or want to

know whether they are doing the right things or doing things right. The teachers and the schools have an important role in “improving parents’ knowledge about child development, parental skills, and the quality of parent-child, parent-parent and parent-teacher interactions and relationships” (Epstein, 1992, p. 1142).

Theoretical Models of Parent Involvement

Models

The importance of parent involvement in children’s education for school achievement and future success in life brings the necessity of creating a comprehensive theoretical model of parent involvement that includes the factors that influence it, the mechanisms of influence, and its outcomes. There are several attempts in the literature to create theoretical models for parent involvement (Hoover-Dempsey & Sandler, 1995; Reed, Jones, Walker, & Hoover-Dempsey, 2000). They have different approaches and examine different aspects of parent involvement. However, all theoretical models of parent involvement have many similarities and overlapping points.

Parent involvement in school is a component of the relationship between the family/child system and the school system presented in the previously discussed CSM. This complex relationship is influenced by factors within the systems that interact (the family and the school), as well as factors from the superordinate systems such as the neighborhood and whole society. This relationship is a dynamic relationship that develops over time and in turn influences other systems and other interactions among systems.

Parent involvement in school has, according to Hoover-Dempsey and Sandler (1995), several levels, that move from the decision to get involved, through the choice of

parent involvement types, to the actual forms of participation, to the educational outcomes for parent and child of parent involvement. The decision to get involved is influenced, according to the authors, by several factors. One is the parent's understanding of the parental role in the child's education. If parents believe that they have an important educational role and that their actions fulfill what is perceived to be a normal parental role, then they are more likely to be involved in their child's education. The role construct is further conceptualized as having three types: *parent-focused*, in which parents believe and act as if they are primarily responsible for their child's education; *school focused*, in which parents believe that the school is ultimately responsible for their child's education; and *partnership focused*, where the responsibilities are truly shared. A parent whose perceived role in the child's education is school focused is less likely to get involved and "interfere" with the school. This role construct may be influenced by the cultural background of the family or by the family's socio-economic status. A second factor influencing the decision to become involved is the parent's sense of efficacy for helping the child to succeed in school. This notion is based on efficacy theory (Bandura, 1997), that one's behavior is the result of the interaction between self and the environment. Thus, parent involvement is a result of the environment of the school (school climate, personnel beliefs and views, school practices) combined with that of the society and culture, together with the individual's personal characteristics. A third factor to influence the parent involvement decision is the parents' perceptions of opportunities, invitations, and demands from the school or from their own children. This factor is facilitative, but it is neither necessary (i.e. parents with a developed positive sense of parental role and a strong sense of self-efficacy will be involved regardless of whether

they are invited or not) nor sufficient (i.e. schools do not have power by themselves to create either positive parental roles or self-efficacy).

Eccles and Harold (1996) group these factors (perceived parental role, self-efficacy, and views of school receptivity, knowledge and values) along with other factors (e.g., achievement expectations and goals for the child) under a generic group named “parent’s beliefs.” This group fits within a model of family involvement in children’s schooling proposed by the authors, in which other factors such as family characteristics (e.g., income, education, family structure, and ethnicity), child characteristics (e.g., age, gender, and temperament), school characteristics (including teacher beliefs), and neighborhood characteristics influence the parents’ and the teachers’ practices for family-school collaboration. These influences are confirmed by other authors as well. Smith, Connel, Wright, Sizer, and Norman (1997) tested a model that showed that family background characteristics (i.e., family structure, family income, and parent education), along with parents’ perception of teacher provision of involvement opportunities and parent beliefs (e.g., parents’ attitudes toward involvement, parents’ perceived importance of education) are influential on parent involvement, both at home and at school.

The parental choice of involvement types is influenced, according to Hoover-Dempsey and Sandler (1995), by a number of factors. The first factor is the parents’ perceived personal specific domains of skills and knowledge. The second influence encompasses a mixture of parental employment and other family demands, such as time and energy. Hoover-Dempsey and Sandler emphasize that these demands and responsibilities outside the child’s schooling have an impact on how the parent will become involved, not whether he or she will get involved. The third set of factors

influencing the parent's choice of form of involvement is the specific invitations and demands for involvement expressed by the school and the child.

The types of parental involvement in children's educations are, in the Eccles and Harold (1996) model, (a) direct instruction, involvement, and monitoring, (b) volunteering at school, (c) supporting school activities, (d) attending school conferences, (e) requesting information about child's performance and involvement opportunities, and (f) participating in school governance (such as participating in PTA/PTO meetings or being a member of the parent advisory group or the parent policy council). The teachers' practices to increase parental involvement in school are (a) organizing parent conferences, (b) requesting help from parents, (c) providing information, (d) providing meaningful ways for family members to get involved, and (e) giving individual feedback.

Cultural and social class factors

The fact that family background influences the way parents perceive the opportunities offered by the schools and their attitudes toward involvement is also supported by Lareau (1996). An ethnographer, the author draws attention to the fact that, when studying parent-school relationships, many scholars start from the wrong premise, namely, that virtually all parents and teachers share their own aspiration for parent involvement with the school and also, inappropriately, assume that all share the views regarding appropriate childrearing strategies. Based on ethnographic research, Lareau states that, first, there are major social class differences in regard to the meaning that parents give to parent involvement; second, in lower-class families the beliefs about childrearing may conflict with teachers' beliefs; and third, the researchers should pay more attention to the

impact of class differences in social networks on parent involvement at school.

The author concludes that many family-school advocates have an imperfect analysis, by not considering the families' various approaches to school, especially the meanings the families attribute to being helpful. Also families differ in their views on childrearing strategies and their perception of power and threat the teachers might have in their lives. (Lareau, 1997).

Not only has social class an important influence on parent perceptions and parent involvement, but also the ethnic background does. Sontag and Schacht (1994) conducted a study in a Southwestern state with a sample of 536 subjects representing a mix of rural and urban families and a diverse ethnic representation (white, Hispanic, American Indian, African American, and Asian). They found, among other results, that Hispanic and American Indian families reported more difficulties in obtaining information about their children. The authors conclude that the findings of their study suggest six implications for improving family involvement, one of them being that families coming from diverse ethnic and cultural backgrounds differ in important ways from the families identified with the dominant culture and thus they require strategies that are tailored to their unique needs.

Cultural and social class background could be particularly important for children with disabilities. Harry (2002) asserts that an important factor that should be considered in serving children with disabilities (and implicitly in studying the parent involvement of children with disabilities) is the fact that these children come from various cultural backgrounds. The author notes a general tendency in the field toward (a) an ethnocentric approach that makes it difficult for researchers and practitioners to recognize the different

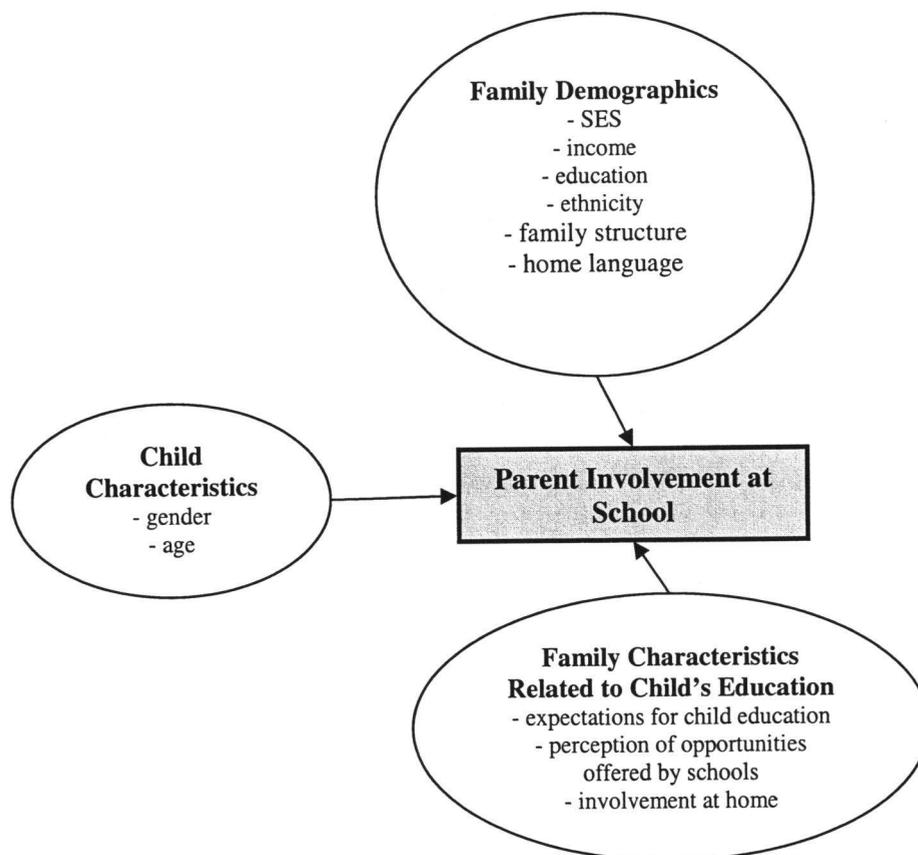
family patterns and practices for those families from non-mainstream groups and (b) a perception of the disability as the master status of the minority of children with disabilities, ignoring their cultural and linguistic identities. In another study involving children with disabilities from various cultural and linguistic backgrounds, Al-Hassan and Gardner (2002) find that the most important barriers that limit parent involvement at school are (a) language, (b) lack of information, (c) teachers' unfamiliarity with the parent's culture, (d) negative educational experiences (e.g., parents not invited, rejected, or not welcome at school), (e) unfamiliarity with the U.S. educational system, and (f) different views regarding involvement in school.

Summary

To summarize, parent involvement at school is a process that includes several steps taken by the parents: to decide to get involved, to choose specific types of parental involvement, and to actually get involved and participate together with school in their child's education. The factors influencing both the decision to get involved and the choice of involvement activities are present within the systems that interact: the child, the family, the school and the society. Among these factors, more prominent are family background characteristics, parents' perception of teacher provision of involvement opportunities, parents' achievement expectations and goals for their child, involvement in learning activities at home, and several child characteristics such as gender and age. The present study proposed to test these predictors of parent involvement in a linear regression equation. Figure 2-1 presents the model of parent involvement at school that was tested by the present study.

Figure 2-1.

The model of parent involvement in school and its predictors studied in the present study.



Conclusion and Research Questions

Transition to kindergarten represents a very important process in children's lives. The success of transition to kindergarten is translated into positive school adjustment for the child and increased parent involvement for the family. The most important factors influencing transition to kindergarten are represented by (a) the practices the schools employ to ease children's and families' transition to kindergarten and (b) the involvement of the family in their child's education. For the families, an important outcome of a successful transition to kindergarten is represented by an increased parent involvement

with the school and a more effective family-school relationship. Thus, parent involvement emerges as a key concept for the transition to kindergarten. During the child's first year of formal schooling, the family and the school are initiating their patterns of relationship, which in turn will have a great impact on future child achievement.

Parent involvement is, conceptually, part of the larger theoretical framework of transition to kindergarten presented as the CSM. Parent involvement with school is influenced by several factors that include child characteristics, parent characteristics (e.g., demographics, beliefs, expectations), and school characteristics (e.g., opportunities offered – and, most important, how these opportunities are *perceived* by the parents – or school climate).

For children with disabilities and their families, the transition to kindergarten is even more complex and important than for typically developing children. Children with disabilities receive attention from policy makers and the general public, but there is little research that studies a nationally representative sample of children and families in transition to kindergarten.

The study explored three areas related to parent involvement and kindergartners with disabilities. Using a nationally representative dataset, the proposed study will seek answers to the following research questions (RQ):

1. What is the general profile of kindergarten-aged children with disabilities in the United States, and how is this profile different from the profile of typically developing children?

The profile of children with disabilities will be created using several sets of variables grouped in four major categories: (a) child variables, (b) family variables, (c) school variables, and (d) community variables. It is expected that kindergarteners with disabilities differ from typically developing children in regard to age, racial distribution and family's socioeconomic status. The other variables (i.e., child's gender, other family variables except socio-economic factors, school variables, and community variables) are not expected to differ between children with disabilities and typically developing children.

Children with disabilities were expected to have a larger age range than typically developing children, with a higher mean. The practice of "redshirting" (delaying school entry with one year) mentioned by West, Meek and Hurst (2000) could be especially true for parents of children with disabilities who may hope their children will "catch up" with 12 more months of maturity. This might be particularly true for children with cognitive disabilities such as Mental Retardation. It is thus expected that some disabilities would have a higher age range and mean than other.

The racial distribution of children with disabilities is expected to be different from the racial distribution of typically developing children, with more children with disabilities coming from non-Caucasian groups, especially African-Americans. There is a big debate in the literature regarding the overrepresentation of minority populations in the special education (Patton, 1998; Turnbull, Turnbull, Shank & Smith, 2004; Zhang & Katsiyannis, 2002). Turnbull, Turnbull, Shank & Smith (2004) reported the percentages of students age 6 through 21 for the school year 1998-1999, by race, as follows: White 63.6%, Black 20.2%, Hispanic 13.2%, Asian and Pacific Islander 1.7%, and American Indian 1.3%. The racial distribution of the kindergartners with disabilities from the

present study is different from the racial distribution of school-age children published in literature. There is a lower percentage of African American kindergartners with disabilities (15.0%) than African American school-age children with disabilities (20.2%) and a lower percentage of Asian and Pacific Islander kindergartners (1.7%) than school-age Asian and Pacific Islander (together) children with disabilities (3.1%, cumulate). The percentages for White and Hispanic children are comparable. This is an interesting phenomenon that deserves more attention. The overrepresentation of school-age minorities (especially African Americans) in Special Education is a statistical reality; the question is why it happens.

As for the family's socio-economic status, the *Twenty-Fourth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (2002)*, using the same dataset, found that children with disabilities, proportionally, are more likely to live in poverty compared with typically developing children.

2. What are the practices, that the schools reported they offer to enrolled children with disabilities and their families to ease the transition to kindergarten and increase parent involvement? How do these school practices correlate with actual parent involvement in school during the kindergarten year, as reported by the parents at the end of the kindergarten year?

The hypothesis for this research question is that schools are more likely to offer low-intensity activities such as phoning home, sending information, and offering open houses, and less likely to offer activities that are more direct and feature more family-teacher contact, such as home visits. It is expected that the actual amount of parent involvement in school activities is positively correlated with the number of activities the

school offered during the academic year. This hypothesis is based on other researches on transition to kindergarten activities offered by the schools. Rathbun and Germino-Hausken (2001) reported that among six transition to kindergarten activities offered by the school the most common were phoning and sending information home, inviting parents and children to visit their class prior to the start of the school year, and inviting parents to orientations.

3. What is the nature of parent involvement at school for parents whose children had an Individualized Education Program (IEP) in their records in the spring of the kindergarten year, as reported by the parents at the end of kindergarten year? What factors directly predict parent involvement during the kindergarten year?

The hypothesis for this research question is that parents of children with disabilities will be more involved in activities such as participating in open houses and school events, and less in official meetings such as attending a meeting of a parent advisory or policy council. In terms of parent involvement predictors, the hypothesis is that family demographic factors (ethnicity, social status, family structure, and mother's education), and family characteristics related to child's education (i.e., parent's perceptions of opportunities offered by the school, parent's expectations for the child's education, and parent involvement at home) will be significant predictors for parent involvement at school. These predictions are based on the theoretical models for parent involvement proposed by Hoover-Dempsey and Sandler (1995), Eccles and Harold (1996), and especially the study of Smith et al (1997) which showed that parents' background characteristics such as family income, parents education, and family structure influence parent involvement at school.

Child's characteristics (age and gender) are present in the model tested by Eccles and Harold in 1996, but they are not expected to significantly predict parent involvement in school. Eccles and Harold's model addresses a wider age range, whereas the present study included only kindergarten-age children. The age range of these children is too small to have a significant influence on parent involvement. However, child's age and gender were introduced in the regression equations as control variables.

It was expected then that parents who are more involved with the school will be the parents who live with a spouse or partner, have higher education, are from the white middle class, and are more involved with learning at home. Also, based on Vaden-Kiernan and Chandler (1996) study, more involved parents will be individuals who perceive more opportunities offered by the schools and who have higher expectations for their children's future education.

CHAPTER III –METHOD

Dataset and Subjects

Dataset Overview

This study used the Early Childhood Longitudinal Study Kindergarten Class of 1998-1999 datasets (ECLS-K). The ECLS-K Base Year file contains data from 21,260 children from throughout United States. When appropriately weighted, the sample is representative of the 3,679,000 children enrolled in kindergarten for the first time in the fall of 1998 (U.S. Department of Education & National Center for Educational Statistics, 2003). Six waves of data collection were planned, including two in kindergarten, two in the first grade, one in the third grade, and one in the fifth grade.

Sampling Procedure

The ECLS-K employed a multistage probability sample design in order to select a nationally representative sample of children attending kindergarten in 1998-1999. The primary sampling units (PSUs) were geographical areas consisting of counties or groups of counties. The second stage units were schools within the PSUs, and the third (final) stage units were students (kindergartners) attending the sampled schools. The initial sample frame contained 1,404 PSUs, representing counties or groups of contingent counties. Each PSU that did not have at least 350 five-year old children was collapsed with an adjacent PSU. The final ECLS-K PSU frame contained 1335 PSUs. Within each PSU, schools with fewer than 24 kindergartners for public schools and 12 kindergartners for private schools were clustered together before the second-stage sampling. The public and private schools represent different, distinct sampling strata; within each of these strata, the schools were sorted to ensure good sample representation. From all PSUs a

number of 100 were randomly selected. The second-stage sampling to determine the schools within each PSU was done by, first, ranking the schools by size and grouping them in three categories of roughly equal aggregate size, and, second, sorting the schools within each size category. The third stage of sampling, the child-level sampling was done by trying to obtain an approximately self-weighting sample of students and to achieve at least minimum sample size for each targeted population. The only subgroup that was oversampled was the Asian and Pacific Islander (API) population. A complete list of kindergartners in each sampled school was obtained and two independent sampling strata were created for each school, one containing API students and the other containing all other students. Within each stratum, students were selected using equal probability systematic sampling. Twins were sampled as a unit (if one of the twins was sampled, then both children were automatically included). Generally, the number of children targeted at one school was 24. Subsequently, the sampled children's parents or guardians were located, contacted, and informed about the purpose of the study. Informed consent was obtained for child assessment and parent interview (U.S. Department of Education & National Center for Educational Statistics, 2003).

Depending on the source (i.e., child assessment, parent interview, teacher questionnaire) and the time of data-collection (fall or spring) of the data used in analyses, a specific sampling weight is to be used, strictly following the *ECLS-K Base Year User's Manual* guidelines. The sampling weight used in the present study should be used, according to the *Manual*, for analysis of parent interview data from both fall- and spring-kindergarten data collection, alone or in combination with fall- and/or spring-kindergarten teacher questionnaire.

Subjects

From the initial sample of 21,260 subjects, a subsample of children with Individualized Education Plans (IEPs) was selected to be analyzed, using an item from the *School Records Abstract Form*. The new sample contained 1,016 subjects. These children are profiled in the Results section in answer to research question #1.

Materials

Data Collection

The data were collected from the children, their parents, and their schools. The children were directly assessed twice, once in the fall of their kindergarten year and once in the spring. The participating families were interviewed twice during the year, once in fall and once in spring. Data collected from the schools come from several different sources. The kindergarten teachers completed questionnaires in the fall and the spring. The special education teachers completed a questionnaire only in spring. School administrators also completed a questionnaire in the spring. Other data were collected from each student's Records Abstract Form, completed by school staff in the spring of each year, as well as from other sources (e.g., Facilities Checklist and Head Start Questionnaire).

Parent Interview

The parent interview was conducted using a Computer Assisted Telephone Interview (CATI) or, for families without a telephone, a Computer Assisted Personal Interview (CAPI). The time of the parent interview averaged 65 minutes. The majority of parents participating in the base year of data collection were interviewed in the fall of 1998 and again in the spring of 1999. In the fall the respondents were selected for the

interview according to the following order of preferences: first, the child's mother; second, another parent or guardian; and third, another household member. In the spring the respondents were selected for the interview according to the following order of preferences: first, the fall kindergarten respondent; second, the child's mother; third, another parent or guardian; and fourth another household member.

Teacher Questionnaires

The data relevant to this study collected from teachers include a question with seven possible responses indicating the nature and number of transition to school activities offered by the school. These data were collected in the fall of the kindergarten year.

Special Education Teacher Questionnaire

The Special Education Teacher Questionnaire was administered in the spring of kindergarten to those special education teachers who taught sampled children with IEPs. The data relevant to the present study report the child's disability category.

School Administrator Questionnaire

The school principal, administrator, or headmaster was administered a questionnaire in the spring of the kindergarten year. The information relevant to this study includes questions regarding school policies, including those regarding the practices for parent involvement. The Cronbach's alpha reliability for these items is $\alpha = .56$

School Records Abstract Form

The student abstract form was completed by the school staff in the spring of the kindergarten year. The information relevant to this study includes the presence or not of

an IEP in children's records. This is the information from the larger sample that was used to select the subsample used in the present study.

Variables

A set of variables was selected from the original dataset to be used in the present study for the statistical analyses. These variables are either the original variables from the ECLS-K dataset or variables that have been recoded and renamed. Some new composite variables were also created, as will be explained below. Besides the particular codes for each variable, most of the variables from the Parent Interview contain a standardized set of codes, as follows: - 7 = *Refused*, - 8 = *Don't Know*, - 9 = *Not Ascertained* and - 1 = *Not Applicable*. Generally these codes have been recoded so that *Refused*, *Don't Know*, and *Not Ascertained* became *Missing Values*. The *Not Applicable* code was recoded from case to case either as 0 or as *Missing Value*, depending on the nature of the question.

The following section describes the variables used to create (a) the children with disabilities profile, (b) the school practices for easing transition to kindergarten and increasing parent involvement, and (c) the description of the parent involvement in school and its predictors. These variables address research questions 1, 2 and 3, respectively.

Children with Disabilities Profile

The variables used to create the profile of the children with disabilities can be grouped into four major categories: (a) child variables, (b) family variables, (c) school variables, and (d) community variables. Even if the data came from different sources and described more than the individual child with disability, the information in the dataset is child linked, which aids integration for analysis.

Child variables. The child variables that were used to create the children's profile to answer Research Question # 1 are age in the fall of kindergarten year, gender, ethnic group, language spoken at home (English or non-English), type of prekindergarten (e.g., preschool, relative or non-relative home care, Head Start), and disability category. The ethnic group variable used to create the children with disabilities' profile represents the child's ethnicity. Another ethnicity variable representing the mother's rather than the child's ethnicity was subsequently used as a predictor for parent involvement (research question # 3).

Family variables. The family variables used to create the children with disabilities' profile are socio-economic status (SES), family income, family structure, welfare and other public assistance used, a poverty indicator (below or above the poverty line), and parents' education (both parents' education was used whenever possible). SES is represented by a categorical SES index present in the original dataset, representing a quintile indicator of the SES scale (which in turn was calculated by the study's designers using parents' education, family income, and an index for parents' job prestige), with the lowest quintile representing the lowest SES. The indicator for welfare and other public assistance use was created based on a set of questions in the fall parent interview that asked if the respondents had received food stamps or Aid to Families with Dependent Children (AFDC, more recently known as Temporary Assistance for Needy Families, TANF), during the past 12 months from the date of the interview. The composite variable created reflects whether or not the parent received any type of assistance in the past 12 months. The family structure variable reflects whether or not the respondent has a spouse or a partner living in the household.

School and community variables. The school variables that were used to create the profile are school size and school type (private or public). The community variable used is urbanicity. This variable was created by the data collectors using the sampling frame information. It denotes the school's urbanicity as defined by the Census Bureau's TIGER geographic information system (U.S. Department of Education & National Center for Educational Statistics, 2003). This variable has seven categories: (a) large city, (b) mid-size city, (c) large suburb, (d) mid-size suburb, (e) large town, (f) small town, and (g) rural.

School Practices

In order to answer Research Question # 2, we explored the practices that schools employ to improve parent involvement and parent-school communication and, particularly, to ease parents' and children's transition to kindergarten. Teachers reported on these questions in the fall of the kindergarten year and the school administrators in the spring of kindergarten year. The teachers were asked specific questions regarding the transition to kindergarten activities that the school employs (see Appendix A). Descriptive statistics are reported for each question, presenting how many teachers of children with disabilities reported that they offered each specific activity.

The school administrators were asked a series of questions regarding the school's policies regarding school-family-community connections (see Appendix B). The questions asked how many times a specific activity is offered by the school during the academic year. Descriptive statistics are reported for each question. A correlation table was then created, comparing these data with the parent involvement variables (see table 4-12).

Parent Involvement and Its Predictors

To answer Research Question # 3, it was necessary to obtain both a measure of parent involvement and a delineation of potential predictors and then to relate the two bodies of data

Initial Set of Parent Involvement Variables. In the spring of the kindergarten year, the parents were asked a series of questions regarding their involvement with the school. The questions inquired *how many times* during the kindergarten year the parent had participated in one of the following activities with school: (a) open house or back-to-school activities; (b) PTA/PTO meetings, (c) meetings of parent advisory or policy council group; (d) parent-teacher conferences; (e) class events such as a play, sport, or a science fair; (f) volunteering at school; and (g) fundraising activities for the school. The value for each of those variables reflects how many times the respondent claims to have participated in that school-related activity during the kindergarten year. The range of these values is from 0 (not participated at all) and upward. The Cronbach's alpha reliability coefficient for these items is $\alpha = .50$.

A Descriptive Statistics → Frequencies analysis was run using the SPSS software package to check the distribution for these seven parent involvement items. Table 3-1 presents the frequencies for the seven items. We can see that the parent involvement variables are unbalanced, with many *No* answers. We can also notice some outliers in the frequency table; for example for the *open house* variable, several respondents reported attending more than four times per year. It may be reasonable to believe that these values do not reflect the real participation in open house events with the child's class because most classes don't have more than three or four open house activities per year. It appears

that these values are either recording errors, or they represent the respondent's misunderstanding of the question. Perhaps respondents reported *all* open house activities they participated in, for siblings of the child as well, or else the class at issue has very unusual practices.

Table 3-1

Frequency Table for Parent Involvement Variables and (percentages of responses)

Frequency	Parent Involvement activity						
	PTA/PTO		Parent	Parent	School	Volunteer	Fund
	Open house	meeting	advisory	teacher	event	for school	raising
			group	conferences			
0	305 (32.2%)	639 (69.6%)	817 (88.7%)	127 (13.8%)	333 (36.2%)	566 (61.9%)	399 43.4%
1	367 (39.9%)	96 (10.5%)	48 (5.2%)	252 (27.5%)	201 (21.8%)	82 (9.0%)	219 23.8%
2	181 (19.7%)	74 (8.1%)	25 (2.7%)	319 (34.8%)	147 (16.0%)	55 (6.0%)	158 17.2%
3	44 (4.8%)	47 (5.1%)	14 (1.5%)	137 (14.9%)	96 (10.4%)	49 (5.4%)	75 (8.2%)
4	14 (1.5%)	16 (1.7%)	9 (1.0%)	55 (6.0%)	66 (7.2%)	31 (3.4%)	32 3.5%
5	3(0.3%)	11 (1.2%)	3 (0.3%)	13 (1.4%)	31 (3.4%)	18 (2.0%)	16 (1.7%)
6	2 (0.2%)	10 (1.1%)	2 (0.2%)	4 (0.4%)	18 (2.0%)	14 (1.5%)	5 (0.5%)
7		9 (1.0%)		3 (0.3%)	3 (0.3%)	7 (0.8%)	3 (0.3%)
8	1 (0.1%)	7 (0.8%)	1 (0.1%)		6 (0.7%)	10 (1.1%)	2 (0.2%)
9	1 (0.1%)	4 (0.4%)		1 (0.1%)		3 (0.3%)	1 (0.1%)
10	1 (0.1%)	3 (0.3%)		3 (0.3%)	7 (0.8%)	18 (2.0%)	4 (0.4%)
11						1 (0.1%)	1 (0.1%)
12					2 (0.2%)	11 (1.2%)	1 (0.1%)
13						3 (0.3%)	
14					1 (0.1%)	1 (0.1%)	
15		2 (0.2%)	2 (0.2%)		4 (0.4%)	6 (0.7%)	

New Parent Involvement Variables.

Parent involvement in school was measured in two distinct ways. One is the total number of parent involvement activities the parents reported participation in during the kindergarten year (referred in this text as *parent involvement total activities*). The second measure is the number of *types* of activities a parent has been involved in, during the kindergarten year (referred in this text as *parent involvement types*). Each of these two variables was included in two linear regressions.

The first parent involvement variable (measuring the number of times a parent has been involved in during the academic year) was calculated by adding the number of activities reported in each of the seven parent involvement activities items. Before adding the values, the outliers of each item were eliminated, by deleting the cases with answers greater than 3 standard deviations from the mean. The cut-off point was calculated using the formula $cut-off = M - 3 \times SD$, and rounded to the closest full value. Table 3-2 presents the means and standard deviations of each of the seven items, before and after the outliers were eliminated, as well as the maximum values for each item. The resulting variable, *total parent involvement*, has a mean $M = 7.9$, $SD = 6.1$, ranges from 0 to 40, and does not have a normal distribution.

Table 3-2

Means and Standard Deviations for the parent involvement activities, before and after eliminating the outliers

<i>Parent Involvement Items</i>	<i>Before eliminating outliers</i>			<i>After eliminating outliers</i>		
	<i>M</i>	<i>SD</i>	<i>Maximum</i>	<i>M</i>	<i>SD</i>	<i>Maximum</i>
Open house	1.06	1.08	10	1.00	.93	4
PTA/PTO meeting	.85	1.81	15	.63	1.23	6
Parent advisory group	.26	1.05	15	.15	.52	3

Table 3-2 (continued)

<i>Parent Involvement Items</i>	<i>Before eliminating outliers</i>			<i>After eliminating outliers</i>		
	<i>M</i>	<i>SD</i>	<i>Maximum</i>	<i>M</i>	<i>SD</i>	<i>Maximum</i>
Parent teacher conferences	1.89	1.70	25	1.79	1.21	7
School event	1.82	2.80	35	1.59	1.83	10
Volunteer for school	2.80	7.79	99	1.80	3.85	25
Fundraising	1.33	2.61	52	1.14	1.39	9

Another method for analyzing parent involvement in school is to take into account the number of *types* of activities a parent has been involved in during the kindergarten year, rather than by considering the total number of activities a parent has been involved in during the kindergarten year. The later is difficult to interpret with the existing data due to their unbalanced answers and the presence of outliers, which leads to skewed distributions. Measuring the number of *types* of activities a parent has been involved in was done by first recoding the parent involvement variables so the new values are 0 = no, 1 = yes for participation in the activities mentioned and then creating a new composite variable by summing the results. The new variable has values from 0 to 7, and it measures the number of types rather than number of times a parent has been involved in the activity during the kindergarten year. The new variable has a normal distribution with Skewness = - 0.16 and Kurtosis = - 0.722.

Parent Involvement Predictors

The independent variables used for the regression equation to predict parent involvement in order to answer Research Question # 3 can be grouped as follows:

1. Demographic data: family SES, family income, parent's education level, mother's ethnicity, language spoken at home, and family structure.

2. Parent characteristics related to child's education: parent's perception of opportunities offered by school, involvement at home, and parent expectation for child education.

3. Child's characteristics: gender and age.

Demographic variables. The family SES was measured by a composite variable created by the data collectors using parents' education, family income, and an index for parents' job prestige. The SES indicator used in the regression equation is a continuous variable, with lower values indicating a lower SES status (this indicator is different from the SES indicator used in the children's profile, which is a categorical variable). The family income was based on respondents' answers and imputed by the data collectors for the missing values.

The parents' education is measured by a composite variable present in the original dataset. The composite variable was created using the mother's education level and father's education level and it represents the highest education level achieved by the child's parents; if only one guardian or parent resides in the household, the parent education variable reflects that parent's education level.

The initial mother ethnicity variables are represented by *Hispanic, American Indian, Asian, African American, Pacific Islander, White, and Other Ethnicity*. The frequency distribution shows, however, very low values for some ethnic groups. To improve the analysis and to avoid distorted results, the ethnic groups with low frequencies were collapsed into one group, called "other race." Thus, the actual categories that were used in the regression equation are *White, African American, Hispanic and Other Race* with values 0 = no and 1 = yes. The variable recording the

primary language used at home has the values 0 = *other language than English spoken at home*, and 1 = *only English spoken at home*.

The family structure variable was recoded from an original variable from the spring parent interview that asked if the respondent has a spouse living in the household with resulting values 0 = *no spouse/partner in the household* and 1 = *spouse/partner present in the household*.

Parent characteristics related to child's education. The parent characteristics variables used in the regression equation to predict parent involvement in school are (a) parent's perception of child's education-related information and involvement opportunities offered by the school, (b) parent involvement at home, and (c) parent's expectations for child's educational achievement. The *parent's perception of child's education-related information and involvement opportunities offered by the school* variable was created using six items from the spring parent interview. The questions asked the parents how well the school has done with each of six specific activities during the school year (see Appendix B). A new composite variable was created for each subject by calculating the mean of these six variables. The new variable is a continuous variable with values ranging from 1 to 3, measuring the parent's perceptions of opportunities for getting involved and receiving information from the school. A low value represents a parent's low perception of opportunities offered by the school. The *parent involvement at home* variable was created using 11 items from the fall parent interview. The questions asked how often, in a typical week, a family member does a series of activities with the child (see Appendix C). A new continuous variable measuring home involvement was created by calculating the mean of the above-mentioned 11 items. A higher value means

for this variable represents a higher parent involvement at home. The *parent expectation for child's education* variable was created from a fall parent interview question, which asked the respondent what degree the parent expects the child to complete from less than high school degree to a PhD, MD, or other higher degree.

Child characteristics. The child characteristics used in the regression equation for parent involvement are child's gender and child's age. The age is measured in months at the date of child direct assessment, which happened in the fall of the kindergarten year between October and December.

Procedure

Data Files

The ECLS-K dataset has two forms. First is the public-use datasets, in which some variables have been altered or suppressed if their disclosure breaches confidentiality agreements. The variables regarding children's types of disabilities are among the suppressed variables. The second form, the one that it is used in this study, is the restricted-use dataset. It contains data collected on all suppressed variables. To use the restricted-use dataset, the investigator and his advisor have received a license from the United States Department of Education (USDE) to use the restricted use files. These data have been handled with greatest care to guard the confidentiality of the information they contain.

The restricted-use dataset utilized in this study is a combination of three files: the ECLS Base Year file, the ECLS Special Education Teacher Interview file, and the ECLS Student Record Abstract file. These three data files were merged into one single file using the *child identification code* variable (*ChildID*) as a match variable. The ECLS

Base Year file contains data collected only in kindergarten, which is considered as the base year for the dataset. The Student Record Abstract file contains, among other data, information about the presence or not of an Individualized Education Program (IEP) in the child's record. The ECLS Special Education Teacher Interview File contains information related to the disability category for each child with IEP.

Statistical Procedures

To analyze the datasets, the *Statistical Package for Social Sciences* (SPSS) and *STATA for Windows* software were used. SPSS was used to merge files, select the subsample, recode variables, create new variables, and perform descriptive statistical analysis. STATA was used for performing the analytic statistical analysis (Linear Regression and Multiple Regression analyses). The *Stat/Transfer 7* software package was utilized to transfer files between SPSS format and STATA format.

To analyze the data on the 1,016 children with disabilities, several statistical techniques were employed. Descriptive Statistics, reporting the frequencies, was used to create the child with disabilities profile, to describe the school practices for easing transition to kindergarten and improving the parent involvement in school, and to describe the parent involvement practices as reported by the parents. For the variables used in the children's profile, the same analysis was conducted with the subsample of typically developing children, i.e., the children with no IEP listed in their records, and comparisons were made.

To analyze the relationship between parent involvement and its predictors to answer research question #3, a Linear Regression technique was employed. The dependent variable for the regression was the Parent Involvement composite variable

created from seven recoded items from the parent interview. The independent variables used in the equation are those measuring (a) family's socio-economic status (SES), (b) the parent's education, (c) the family's income, (d) the family's structure, (e) the family's ethnicity, (f) the language spoken at home, (g) the parents' expectations for child's highest degree of education, (h) the parents' perception of opportunities and information offered by the schools, and (i) the involvement at home. Taken together, these procedures produced answers to the three research questions.

CHAPTER IV - RESULTS

The purpose of this study was (a) to create a profile of kindergarten-age children with disabilities in the United States, (b) to examine the practices that schools employ for improving the family-school connection and parent involvement at school for children with disabilities, and (c) to examine parent involvement at school for parents of kindergarten-age children with disabilities, identifying the factors that influence this involvement. Several analyses were conducted in order to accomplish the goals of this study. The following sections present the results of these analyses, grouped by the research questions they answered.

Children with Disabilities Profile

The first research question examined the general profile of kindergarteners with disabilities in the United States and asked how this profile differs from that of typically developing children. Several variables contributed answers to this question. These variables were grouped in four categories: (a) child variables, (b) family variables, (c) school variables, and (d) community variables.

Child Variables

The child variables used for the children with disabilities' profile included child's age, child's gender, child's ethnic group, language spoken at home (English or non-English), type of prekindergarten care (e.g., preschool, relative or non-relative home care, Head Start), and disability category.

Age

The average age of children with disabilities, in months, in the fall of the kindergarten year was $M = 70.3$, $SD = 5.7$, slightly higher for boys ($M = 70.5$, $SD = 5.9$)

than for girls ($M = 69.9$, $SD = 5.3$). There were two outliers, two children with ages 96.5, and 96.3 months respectively, both served by Special Education under *Speech Impairment/Disability*. The two outliers were eliminated from the profile before calculating the mean and standard deviations. The children with disabilities' age in the fall of kindergarten year ranges from 51.13 to 87.2 months, or 4.2 to 7.2 years, respectively. Table 4-1 presents the means and standard deviations for children's age by disability category. We can see that Mental Retardation disability has the higher mean ($M = 75.0$ months), whereas Learning Disability and Speech Impairment/Disability have the larger age ranges (27.5 months) except for the category labeled by the data collectors Other Disability, which has a range of 30.5 months.

Table 4-1

The age distribution by disability categories for the children with disabilities in the ECLS-K dataset

<i>Disability category</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Range</i>
Learning Disability	131	72.7	6.5	59.6	87.2	27.5
Serious Emotional Disturbance	24	69.8	5.4	60.2	78.3	18.1
Speech Impairment/Disability	664	70.1	5.3	59.7	87.2	27.5
Mental Retardation	34	75.0	6.7	63.8	86.4	22.6
Visual Impairment	8	71.3	5.0	68.2	80.3	12.3
Hearing Impaired	16	74.4	5.3	65.9	83.9	18.04
Health Impaired	16	73.5	4.4	65.9	79.7	13.8
Physical Disability	25	69.5	5.4	59.3	80.33	20.4

Table 4-1 (continued)

<i>Disability category</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Range</i>
Multiple Disabilities	15	69.0	4.9	62.3	78.0	15.6
Developmental Delay	91	70.1	6.2	62.3	85.3	23.0
Autism	13	73.3	6.4	62.6	81.8	19.3
Other Disability	156	70.4	5.9	53.4	83.9	30.5

Note. The age is measured in months at the date of fall child assessment, which happened between October and December 1998.

Running the same analysis on the other subsample (i.e., typically developing children or children with no IEPs in records), the results for age are $M = 68.5$, $SD = 4.38$, ranging from 54.23 months to 86.6 months (after eliminating an outlier of 92.93 months). The mean difference for age between typically developing children with disabilities is statistically significant, $t(13,996) = 12.15$, $p < .001$, but the difference is very low, less than two months (1.8 months). Surprisingly, the age range of kindergartners with disabilities (51.13 to 87.2 months), as calculated in the fall of the kindergarten year, does not differ from the typically developing children's age range (54.23 to 86.6 months). The statistical significance of age means is probably due to the size of the sample utilized in this study. Since the mean difference of age between children with disabilities and typically developing children is less than two months and the age range is quite similar, we can conclude that children with disabilities and typically developing children do not differ dramatically in regard with their age, though there is a statistically significant difference: children with disabilities, on average, are almost two months older than their non-disabled peers.

Gender

In the sample of children with disabilities, there were more boys than girls (65.8% boys compared with 34.2% girls), whereas for the typically developing children the percentages are 49.9% boys and 50.1% girls. The difference in gender distribution between typically developing children and children with disabilities (i.e., without and with IEP) is significant, $\chi^2(1, N = 15,249) = 69.77, p < .001$. The gender disproportion for children with disabilities was expected, and the implications and possible explanations are discussed in the Discussion section.

Race

Table 4-2 presents the racial distribution for children with disabilities and typically developing children. The two distributions appear to be quite similar, except for the difference recorded for the Asian group. However, the overall difference in race distribution between typically developing children and children with disabilities (i.e., without and with IEP) is significant, $\chi^2(7, N = 15215) = 34.27, p < .001$. This fact could be attributed to the big sample size. Comparing each ethnic group for children with disabilities and typically developing children, the only significant difference between was found for the Asian group, $\chi^2(1, N = 15250) = 25.22, p < .001$. For the White, Black, and Hispanic ethnic groups there was found no significant difference between children with disabilities and typically developing children, respectively. Although statistically the difference in racial distribution is significant, it was expected that the racial distribution for children with disabilities would be more different than the one for typically developing children, especially for some racial groups such as African American, for the

reasons presented in the review of the literature. The implications of this finding and possible explanations are further discussed in the Discussion section.

Table 4-2

The ethnic distribution for the children with disabilities and typically developing children subsamples of ECLS-K dataset.

<i>Race</i>	<i>Children with disabilities</i>	<i>Typically developing children</i>
White	61.1%	58.3%
Hispanic	15.7%	15.9%
African American	15.0%	14.2%
Asian	2.5%	6.4%
American Indian/Alaska Native	2.5%	1.7%
Hawaiian/Other Pacific Islander	0.6%	1.1%
Other Race	3.0%	2.5%

Language

The great majority of the families of children with disabilities reported using English as the primary language at home, with 7.9% of the subjects declaring that they speak another language at home. For the sample of typically developing children, the percentage of families reporting other language than English at home is 11.4%. This is a quite unexpected finding. The investigator didn't have any reason to think that, proportionally, there are less non English speakers among families of children with disabilities than families of typically developing children. The difference is statistically

significant, $\chi^2(1, N = 13,870) = 14.99, p < .001$, and the percentage difference appears to be meaningful. The possible causes are discussed in the Discussion section.

Prekindergarten care

Table 4-3 presents the prekindergarten child care for both children with disabilities and typically developing children. The great majority of children (both children with disabilities and typically developing children) had experienced a form of non-parental child care before entering kindergarten, with only about 15% of respondents reporting no non-parental child care before kindergarten. However, there are differences in the types of prekindergarten child care that children with disabilities and typically developing children attended. More typically developing children than children with disabilities who attended regular center-based child care (36.4% compared with 30.1%), whereas for Head Start attendance the ratio is opposite, with more children with disabilities attending a Head Start program compared with typically developing children (13.8% compared with 7.3%). Head Start regulations require that at least 10% of its enrollees be children with disabilities

Table 4-3

Child care before kindergarten for the children with disabilities sample of ECLS-K dataset

<i>Type of prekindergarten care</i>	<i>Typically Developing Children</i>	<i>Children with Disabilities</i>
Parental care only	14.7%	15.3%
Relative care	11.1%	12.2%
Non-relative care	8.4%	5.4%

Table 4-3 (continued)

<i>Type of prekindergarten care</i>	<i>Typically Developing Children</i>	<i>Children with Disabilities</i>
Head Start program	7.3%	13.8%
Center-based program	36.4%	30.1%
Two or more programs	3.2%	2.8%
Location varies	0.9%	0.8%
Missing values	16.8%	17.5%

Disability Categories

Table 4-4 presents the distribution by children's main disability category. Noteworthy is the fact that almost 70% of the children in this sample received services under Speech Impairment/Disability, followed by Learning Disability (13.6%) and Developmental Delay (9.5%). We can also note that the gender disproportion is maintained within most of the disability categories.

Table 4-4

Disability categories by gender for the children with disabilities in ECLS-K dataset

<i>Disability</i>	<i>Count (%)</i>	<i>Count by gender (% within disability)</i>	
		<i>Male</i>	<i>Female</i>
Speech impairment/disability	664 (69.2%)	452 (68.1%)	212 (31.9%)
Learning disability	131 (13.6%)	88 (67.2%)	43 (32.8%)
Developmental delay	91 (9.5%)	55 (60.4%)	36 (39.6%)
Mental retardation	34 (3.5%)	21 (61.8%)	13 (38.2%)
Physical disability	25 (2.6%)	15 (60.0%)	10 (40.0%)

Table 4-4 (continued)

<i>Disability</i>	<i>Count (%)</i>	<i>Count by gender (% within disability)</i>	
		<i>Male</i>	<i>Female</i>
Serious emotional disturbance	24 (2.5%)	19 (79.2)	5 (20.8%)
Health impaired	16 (1.7%)	9 (56.3%)	7 (43.8%)
Hearing impaired	15 (1.6%)	8 (53.3%)	7 (46.7%)
Multiple disabilities	15 (1.6%)	11 (73.3%)	4 (26.7%)
Autism	13 (1.4%)	9 (69.2%)	4 (30.8%)
Visual impairment	8 (0.8%)	7 (87.5%)	1 (12.5%)
Other disability	156 (16.3%)	96 (61.5%)	60 (38.5%)

Family Variables

The family variables included in the profile of children with disabilities are (a) SES, using a categorical SES measure, (b) a poverty indicator, (c) the receipt of welfare in the past 12 months, and (d) family structure.

SES

The SES categorical measure was created by the data collectors using data regarding parent education, family income, and a job prestige indicator. The measure has five ranked levels, or quintiles. They go from the first quintile, which represents the lowest fifth of SES, to the highest quintile, which represents the highest level of SES. The SES distribution for all children (with and without disabilities) is shown in table 4-5. Worth mentioning is the fact that there are more children with disabilities in the lower quintiles (which represent lower socio-economic status) than typically developing children. This finding is confirmed by the fact that 25.5% of children with disabilities live

under the poverty level as compared with only 16.3% of typically developing children (see next paragraph).

Table 4-5

SES distribution using a categorical SES measure

SES category	Typically Developing Children	Children with Disabilities
First quintile	16.0%	26.3%
Second quintile	18.4%	23.0%
Third quintile	19.2%	18.3%
Fourth quintile	20.0%	16.5%
Fifth quintile	22.4%	11.5%

Poverty and Receipt of Welfare Support

Another way to check the poverty level for the subjects in the sample studied was to survey the poverty indicator variable and/or the family's receipt of welfare support in the past 12 months. The poverty indicator was determined by the data collectors using data from the spring. There was a big difference for the percentage of children living under the poverty level between children with disabilities and typically developing children. More than a quarter (25.2%) of children with disabilities lives under the poverty level, compared with only 16.3% of typically developing children. These findings parallel the results of the other poverty indicator used in this study, the receipt of any type of welfare support (AFDC or TANF combined with food stamps) in the past 12 months; more than one fifth (21.9%) of families of children with disabilities declared at the interview date that they received support in the past 12 months, compared with only 13.0% of families of typically developing children. It is clear that, proportionally, there

are more children with disabilities than typically developing children living in low-income families. This fact was confirmed by other studies as well (U.S. Department of Education, 2002).

Family Structure

Family structure for research question # 1 was assessed measuring the percentage of respondents declaring whether or not there is a spouse or a partner living in the household. For the sample of children with disabilities, 23.6% of respondents declared that there is no spouse/partner living in the household; for the typically developing children the percentage of families reporting no spouse/partner in the household is 19.3%. It seems that more children with disabilities live in a single-parent family compared with typically developing children.

School Variables

The school variables taken into account for the children with disabilities profile in this study are the type of school (private or public) and the school size (school enrollment).

School Type

The great majority of children attend public schools (see Table 4-6), with almost three quarters of typically developing children (73.3%) and almost ninety percent (89.6%) of children with disabilities attending public schools. However, there is a remarkable difference with regard to attendance at private schools. For example only 3.1% children with disabilities attend Catholic schools, compared with 12.4% of typically developing children.

Table 4-6

Type of school attended by children with disabilities and typically developing children

<i>Type of school</i>	<i>Typically Developing Children</i>	<i>Children with Disabilities</i>
Private schools		
Catholic	12.4%	3.1%
Other religious	5.8%	1.2%
Other private	4.2%	2.0%
Public schools	73.3%	89.6%
Missing	4.3%	4.2%

School Size

The distribution by school size of typically developing children and children with disabilities is comparable, as seen in table 4-7. Difference in school size between typically developing children and children with disabilities are not remarkable. However, it is important to note that almost 70 percent (68.6%) of children with disabilities attend big schools, with at least 300 students enrolled. This fact might have an important impact for children with disabilities compared to typically developing children, as will be discussed in the Discussion section.

Table 4-7

School size (by total school enrolment) for the children with disabilities sample of ecls-k dataset

School size	Typically Developing Children	Children with Disabilities
0 – 149 students	6.9%	6.4%
150 – 299 students	19.3%	19.8%
300 – 499 students	25.9%	24.1%
500 – 749 students	28.0%	29.8%
750 and above	14.7%	15.4%
Missing data	4.3%	4.2%

Community Variables

The only community variable in the profile of children with disabilities is represented by the residence's urbanicity, which is the type of home the subject lives in. Table 4-8 presents the distribution by residence's urbanicity for children with disabilities and typically developing children. Note that, proportionally, there are more children with disabilities living in small and mid-size communities (mid-size suburb, large and small town, and rural area) than typically developing kindergartners, who are more numerous in large cities or large and mid-size suburbs.

Table 4-8

Descriptive Statistics for Subject's Residence Urbanicity for the Children with Disabilities Sample of ECLS-K Dataset

<i>Urbanicity</i>	<i>Typically developing Children</i>	<i>Children with Disabilities</i>
Large city	17.7%	10.9%
Mid-size city	21.2%	18.2%
Large suburb	26.8%	25.8%
Mid-size suburb	7.3%	8.4%
Large town	3.5%	4.9%
Small town	7.1%	10.3%
Rural	12.1%	17.2%
Missing data	4.3%	4.2%

School Practices for Easing Transition to Kindergarten
and Improving School-Family Connection

The second research question looked at the practices that schools employ in order to (a) ease children's and families' transition to kindergarten and (b) to increase family-school connections. There were two sources of information for school practices: the child's teacher and the school administrator. On the teachers' fall questionnaire, a question asked whether specific activities for easing transition to kindergarten are offered by their school. The school administrator completed a questionnaire in the spring, including a series of items inquiring how many times per academic year a number of

activities are offered to the parents. The following section presents the descriptive statistics (frequencies) for these two variables.

Teacher Questionnaire

Table 4-9 presents the practices for easing transition to kindergarten as reported by the teachers in the fall of kindergarten year. We can see that the most common transition to kindergarten activities that schools offer are the activities that can be called low-intensity, more-formal activities such as *sending home information about the program* (87.2% of the teachers), *inviting the parents and the child to kindergarten before school starts* (81.8%), and *offering orientation at school before school starts* (80.5%). The least common transition to kindergarten activities offered are those that involve more teacher participation or more disruption in the teacher's daily routines, such as *home visits before kindergarten starts* (5.3%), *shortening the school days at the beginning of the kindergarten year* (16.8% of teachers) and *inviting preschoolers into their class* (48.2%).

Table 4-9

School practices for easing transition to kindergarten, fall-kindergarten teacher interview

<i>Type of activity (as reported by teacher)</i>	<i>%</i>
Sending home information about the kindergarten program to parents.	87.2%
Parents and children visit kindergarten prior to the start of the school year	81.8%
Parents come to the school for orientation prior to the school year	80.5%
Prekindergarteners spend some time in the kindergarten classroom	48.2%
Other transition activities	27.3%

Table 4-9 (continued)

<i>Type of activity (as reported by teacher)</i>	<i>%</i>
The school days are shortened at the beginning of the school year	16.8%
Home visits at the beginning of school year	5.3%

School Administrator Questionnaire

Information collected from the school's administrators is presented in Table 4-10. Most of the activities are offered with a frequency of at least 2-3 times per academic year. However, the school administrators reported an unexpected low percent of home visits offered by their school, with more than half of administrators (52.3%) reporting that their school does not offer home visits. The dataset does not offer information regarding the *Other Activities* item in the school administrators' questionnaire. However, only few administrators reported that their school offers other types of activities (8%).

Table 4-10

The parent involvement activities offered by the school during a regular academic year, as reported by the school administrators

<i>Activity</i>	<i>Never</i>	<i>Once</i>	<i>2-3</i>	<i>4-6</i>	<i>> 7</i>	<i>Missing</i>
PTA/PTO meetings	2.7%	0.3%	7.2%	29.6%	52.0%	8.3%
Letters, calendars, newsletters, etc., sent home	0	0.6%	1.7%	3.1%	86.3%	8.3%
Written reports (report cards) of the child's performance sent home	0	0.2%	12.6%	62.1%	16.5%	8.6%
Teacher-parent conferences	0.7%	15.7%	59.3%	5.2%	8.5%	10.6%
Home visits to do one-to-one parent education	52.3%	12.1%	11.2%	4.0%	5.8%	14.5%

Table 4-10 (continued)

<i>Activity</i>	<i>Never</i>	<i>Once</i>	<i>2-3</i>	<i>4-6</i>	<i>> 7</i>	<i>Missing</i>
School performances to which parents are invited	0.2%	3.3%	24.4%	35.2%	28.1%	8.7%
Classroom programs like class plays, book nights,	5.1%	7.1%	34.4%	24.8%	19.5%	9.1%
<i>Activity</i>	<i>Never</i>	<i>Once</i>	<i>2-3</i>	<i>4-6</i>	<i>> 7</i>	<i>Missing</i>
Fairs or social events planned to raise funds for school	9.8%	24.1%	40.1%	11.7%	5.4%	8.8%
Workshops for teachers that focus on parent involvement	22.5%	41.8%	18.6%	3.8%	3.8%	9.3%
Other Activities	5.2%	.8%	.4%	.6%	1.0%	92%

To see how the school's parent involvement practices correlate with the actual parent involvement in specific activities, a correlation matrix was created, using the participation in parent involvement activities, as reported by the parents, and the parent involvement activities offered by the schools, as reported by the school administrators. The correlation matrix (Table 4-11) shows whether or not offering more frequently a specific activity (e.g., parent-teacher conferences) during the academic year significantly correlates with greater participation in the same activity during the academic year as reported by the parents. Unexpectedly, there is a low or nonexistent correlation between the number of activities offered by the schools during the academic year, as reported by the school administrators, and the number of times the parents reported participation in those activities during the kindergarten year, as reported by the parents; for example, no significant correlation between the number of parent-teacher conferences offered by the school and the number of parent-teacher conferences the parents reported attending.

Table 4-11

Correlation matrix for parent involvement activities reported by parents and parent involvement activities offered by the schools, as reported by the school administrators

<i>Parent Involvement Activities as Reported by the Parents</i>							
	Open house	PTA/PTO meeting	Parent advisory group	Parent-teacher conferences	School event	Volunteer for school	Fund raising
<i>School Admin. Report</i>							
PTA/PTO meetings	.092**	.025	.026	.008	.047	.056	.101**
News sent home	.022	-.027	.003	.077*	.005	.011	.032
Report cards	-.065	-.022	-.012	-.064	-.082*	-.018	.002
Parent-teacher conferences	-.052	.058	.033	.014	-.028	-.036	.041
Home visits	-.038	-.023	-.028	.063	.011	-.050	-.079*
Performances for parents	-.009	.012	.024	.075	.092**	.007	.003
Classroom programs	.029	-.067	.044	.061	.057	-.022	-.052
Fundraisers	.006	.042	.038	.040	.048	.046	.095**
Workshops	-.044	-.069*	.010	.017	-.015	-.074*	-.057
Other activity ¹	.378**	.014	.151	.110	-.032	-.039	.186

Note. The variables on the column represent the frequency of parent involvement type of activities offered by the school per year, as reported by the school administrators. The variables on the row represent the number of parent involvement type of activities the parents had attended during the kindergarten year, as reported by the parents.

* $p < .05$. ** $p < .01$.

¹Accumulation of miscellaneous activities unspecified by the dataset.

Parent Involvement with School

Parent Involvement Variables

The third research question looked at the parent involvement at school during the academic year and the factors that predicted it. Two statistical procedures were used to answer this research question. First, descriptive statistics were employed to present the frequencies for the seven parent interview questions that refer to parent involvement at school (see Methods' section). Second, for each of the parent involvement variables created (*parent involvement total activities* and *parent involvement types*) two linear regressions were run, in order to determine the factors that influence parent involvement in school. These regressions used the same variables, except for SES, parent's education, and family income. One regression used, among other predictors, the SES index (a continuous variable created by the data collectors); the other regression used instead parent education and family income variables. The family SES was expected to be a strong predictor for parent involvement at school. This dataset uses a respected SES index created by the data collectors using data from parent education, family income, and parent job prestige. However, to see if parent education and family income have a similar effect on parent involvement at school, the second regression was run. It was expected that family education would be shown to be a significant predictor for parent involvement at school, and not family income.

Table 3-1 in the previous section (the frequency table for parent involvement activities) shows that, for four out of seven items, there are unbalanced results, with more than 50% of the parents reporting that they didn't participate in the activities mentioned. The activity with the greatest level of participation is *parent-teacher conferences*, with

86.2% of the parents reporting participation in at least one parent-teacher conference. Interesting to note is that 13.8% of parents reported that they didn't participate in any parent-teacher conferences. Additionally, more than half of the parents (56.2%) reported participation in only one or two parent-teacher conferences during the academic year. The second activity in rank is *open house*, with 66.8% parents reporting participation. The activities with the smallest reported amount of participation is *participating in parent advisory or parent policy meetings* (11.3% of parents reporting participation), followed by *participating in PTA/PTO meetings* (30.4%) and *volunteering for school* (38.1%). Generally these findings were expected, except for participation in parent-teacher conferences, which had been anticipated to be greater.

The first dependent variable for the regression equation (measuring number of types of activities parents reported participation during the academic year) is measured on a scale from zero to seven. It has a mean $M = 3.54$, $SD = 1.68$, with a normal distribution. The second dependent variable for the regression equation (measuring the total number of activities the parents reported participation during the academic year) has a range that goes from 0 to 40. It has a mean $M = 7.98$, $SD = 6.16$. The distribution is not normal.

Parent Involvement Predictors

The predictors for parent involvement related to research question # 3 are grouped in three categories: demographic, parent characteristics, and child characteristics. The descriptive statistics for the predictor variables used in the regression will be presented first.

Demographics

The average family income was $M = 42,074.3$, $SD = 47,469.8$. As for *parent education*, 12.2% had graduated from twelfth grade or below (no high school diploma), 33.6% had a high school diploma or equivalent, 31.1% graduated from a vocational/technical program or some college, 10.8% had Bachelor's degree, and 8% had a graduate-level degree. For the *family structure* variable, 66.4% of the respondents reported having a partner/spouse living in the household. The respondent's *ethnicity* is distributed as follows: 55.8% of the respondents were White, 10.8% were African American, 11.0% were Hispanic, and 5.7% were Other Race, with 86.5% of all respondents reporting having English as their primary language. The ethnicity variables were coded as dummy variables (0 = no, 1 = yes). The regressions equations were run using *White* as reference (so the variable *white* was not included in the regression equations).

Parent Characteristics

The *parent perception of opportunities offered by the school* variable had a mean $M = 2.5$, $SD = .45$, on a scale from 1 to 3 (where 1 = *Doesn't do it at all*, 2 = *Just OK*, and 3 = *Does this very well*). The *parent involvement at home* variable was measured on a scale from 1 to 4 (where 1 = *Never*, 2 = *Once or twice a week*, 3 = *3 to 6 times a week*, 4 = *Everyday*), and had a mean $M = 2.81$, $SD = .51$. For the *parent expectation for child's education* variable, 1.1% of the parents expected their child to receive less than high school degree, 16.0% expected the child to graduate from high school, 16.6% expected the child to attend two or more years of college, 34.1% expected the child to finish a 4 or

5 years college, and 17.7% expected the child to earn a graduate-level degree or other higher degree.

Child Characteristics

The child characteristics used in the regression equation were child's gender and child's age; 65% of the children were boys and 35% were girls. As presented in the previous section, the average age of children with disabilities, in months, in the fall of the kindergarten year was $M = 70.3$, $SD = 5.7$, slightly higher for boys ($M = 70.5$, $SD = 5.9$) than for girls ($M = 69.9$, $SD = 5.3$).

Table 4-12 presents the correlation matrix for the variables included in the regression equation. Most of the correlations between the independent variables are either not significant or, for the significant correlations, relatively low (under 0.2). However, there are several exceptions. The SES index is highly correlated with family income and parent's education level (.557 and .810, respectively). This is an expected finding since the SES index is created using parents' education and family income. Parent's education and family income are highly correlated as well (.464); this finding is strongly supported by literature. However, the SES index, on one hand, and the parents' education and family income, on the other hand, are used separately in two regression equations for each dependent variable. Another significant correlation greater than 0.2 is between parents' education level and parents' expectation for children's education (0.227). This correlation is expected to be significant, and is confirmed by the literature: parents with higher education level have higher expectations for their children's educational achievements (Smith et al, 1997).

There is also a high correlation (0.557) between *language spoken at home* and the *Hispanic* variable (mother's ethnicity). It is not surprising since many Hispanic families speak Spanish at home. However, both mom's ethnicity variables and language spoken at home variable were be used in the linear regression equation, in order to differentiate between ethnic groups that have been fully integrated in the mainstream American culture (and speak English at home) and ethnic group that still keep their cultural identity.

Linear Regression

Two sets of regression equations were run to predict parent involvement, one set for each parent involvement variable (i.e., *parent involvement total activities* and *parent involvement types*). Each set was comprised of two regression equations. One regression used the SES index as a predictor (with all the other variables except for parent education and family income). In the second regression, the SES index was replaced with the parent education and family income variables. This was done in order to differentiate the effects on parent involvement of education and income within the socio-economic status. In all regression equations the variables were entered at once.

Parent Involvement Types

For the first regression, with the SES index, the omnibus test of the effect of predictors on parent involvement was significant, $F(11, 735) = 17.28, p < .001$. Among the predictors, the statistically significant ones were SES, $B = .559, p < .001$; family structure, $B = .451, p = .003$; language spoken at home, $B = .792, p = .008$; expectation for child's education, $B = .226, p < .001$; involvement in learning at home, $B = .442, p < .001$; and parents' perceptions of opportunities offered by the school, $B = .425, p = .002$.

The predictors found as not significant were the child's gender, child's age, and mother's ethnicity.

After conducting the regression with parent education and family income instead of the SES indicator, the omnibus test of the effect of predictors on parent involvement was also significant, $F(12, 734) = 16.63, p < .001$. Parent education was found as a significant predictor, $B = .193, p < .001$, whereas family income was not a significant predictor ($p = .318$). The other significant predictors were the same predictors as in the first regression. Table 4-13 presents the regression coefficients, the standardized coefficients and the standard errors for both regressions.

Both regression equations have a fairly good R^2 , with all predictors explaining 23% of the variance of the parent involvement variable for each equation. The coefficients are small, with all standardized coefficients (β) having values around 0.1. This means that a variation of one standard deviation for an independent variable will produce a variation of 0.1 standard deviations in the dependent variable. All predictors expected to be significant were significant, and in the expected direction. It is interesting to note that the language spoken at home and not the mother's ethnic group was a significant predictor for parent involvement at school.

Table 4-13

Summary of Linear Regression Analysis for Variables Predicting Parent Involvement with School, Parent Involvement Types (N = 747)

Variable	Regression 1			Regression 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
SES	.559	.096	.247***	-	-	-
Education	-	-	-	.193	.044	.203***

Table 4-13 (continued)

Variable	Regression 1			Regression 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Income	-	-	-	2.05e-06	2.05e-06	.054
Family structure ^a	.451	.1551	.120**	.431	.159	.115**
Black ^b	-.253	.206	-.053	-.286	.206	-.060
Hispanic ^b	.395	.220	.083	.443	.224	.093
Other race ^b	.030	.226	.003	-.006	.249	< -.001
Language spoken at home ^c	.792	.297	.122**	.827	.299	.128**
Parents' perception of opportunities offered by schools	.412	.134	.113**	.412	.136	.111**
Parent involvement at home	.442	.121	.137***	.473	.120	.147***
Parents' expectations for child's education	.226	.054	.165***	.214	.054	.156***
Age	.003	.003	.030	.003	.003	.030
Gender ^d	-.102	.126	-.029	-.133	.126	-.038
<i>R</i> ²	.23			.23		
<i>F</i>	17.28			16.63		

Note. Race variables are dummy variables; the regression was run comparing with *white*.

^aFamily structure: 0 = no spouse/partner in the household; 1 = spouse/partner present in the household;

^bEthnicity 0 = no, 1 = yes; ^cLanguage at home: 0 = primary language is non-English; 1 = primary language is English; ^dGender: Female = 0, Male = 1

** $p < .01$. *** $p < .001$.

Parent Involvement Total Activities

For the first regression, with the SES index, the omnibus test of the effect of predictors on parent involvement was significant, $F(11, 706) = 11.17, p < .001$. Among the predictors, the statistically significant ones are SES, $B = 1.74, p < .001$; family structure, $B = 1.42, p = .004$; expectation for child's education, $B = .429, p = .027$;

involvement in learning at home, $B = 1.81, p < .001$; and parents' perceptions of opportunities offered by the school, $B = 1.18, p = .01$. The predictors found as not significant are the child's gender, child's age, language spoken at home, and mother's ethnicity.

For the second regression, with parent education and family income instead of SES index, the omnibus test of the effect of predictors on parent involvement was significant, $F(12, 705) = 10.24, p < .001$. Among the predictors, the statistically significant ones are parents' education, $B = .408, p = .021$; family structure, $B = 1.29, p = .016$; expectation for child's education, $B = .416, p = .040$; involvement in learning at home, $B = 1.90, p < .001$; and parents' perceptions of opportunities offered by the school, $B = 1.19, p = .01$. The predictors found as not significant are family income, language spoken at home, mother's ethnicity, child's gender, and child's age.

Both regression equations have a smaller R^2 than the regression equations for *parent involvement types*, with all predictors explaining only 15% of the variance of the parent involvement variable for each equation. Generally the standardized coefficients are smaller than the standardized coefficients for the regression equation on parent involvement types variable. All predictors expected to be significant were significant, and in the expected direction, except for parents' ethnicity. Parents who got involved in more types of parent involvement activities, as well as parents who participated in more parent involvement total activities are the parents who are more educated, who live with a partner, who perceive schools as offering opportunities for involvement, who are more involved at home in their child's education, and who have higher educational expectations for their child. It is interesting to note that, as opposed to the *parent*

involvement types variable, the language spoken at home is not a significant predictor for total parent involvement at school.

Table 4-14

Summary of Linear Regression Analysis for Variables Predicting Parent Involvement with School, Parent Involvement Total Activities (N = 718)

Variable	Regression 1			Regression 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
SES	1.746	.358	.213***	-	-	-
Education	-	-	-	.408	.176	.120*
Income	-	-	-	< .001	9.47e-06	.116
Family structure ^a	1.429	.500	.104**	1.296	.534	.094**
Black ^b	-.678	.610	-.038	-.795	.606	-.045
Hispanic ^b	.467	.663	.032	.707	.671	.040
Other race ^b	-.041	.887	.003	-.091	.927	-.003
Language spoken at home ^c	.874	1.112	.035	.945	1.115	.038*
Parents' perception of opportunities offered by schools	1.184	.458	.088**	1.195	.463	.088**
Parent involvement at home	1.189	.450	.155***	1.906	.451	.163***
Parents' expectations for child's education	.429	.194	.027*	.416	.202	.082*
Age	.062	.037	.056	.054	.037	.049
Gender ^d	-.146	.465	-.011	-.221	.466	-.088
<i>R</i> ²	.15			.15		
<i>F</i>	11.17			10.24		

Note. Race variables are dummy variables; the regression was run comparing with *white*.

^aFamily structure: 0 = no spouse/partner in the household; 1 = spouse/partner present in the household;

^bEthnicity 0 = no, 1 = yes; ^cLanguage at home: 0 = primary language is non-English; 1 = primary language is English; ^dGender: Female = 0, Male = 1

p* < .01. *p* < .001.

Summary of Results

Research Question # 1: What is the general profile of kindergarten-aged children with disabilities in the United States, and how is this profile different from the profile of typically developing children?

The profile of children with disabilities yielded some interesting, unexpected findings. The racial distribution of children with disabilities (research question # 1) is closer to the racial distribution of typically developing children than expected. Proportionally, there are fewer non-English speakers among children with disabilities than among typically developing children. Fewer children with disabilities, compared with typically developing children, attended center-based prekindergarten programs, and more children with disabilities attended a Head Start program. Fewer children with disabilities, proportionally, attended a private school than typically developing children. Proportionally, more children with disabilities live in low-income families than do typically developing children, which is an expected finding. An interesting fact is that children with disabilities tend to live in smaller communities than typically developing children.

Research Question # 2: What are the practices, that the schools reported they offer to enrolled children with disabilities and their families to ease the transition to kindergarten and increase parent involvement? How do these school practices correlate with actual parent involvement in school during the kindergarten year, as reported by the parents at the end of the kindergarten year?

The school practices for involving parents and easing transition to kindergarten that were most reported by the teachers were generally practices that are low-intensity,

more formal, and less disruptive for the teacher, such as organizing orientations at school or sending home information (letters, brochures, etc). Moreover, the frequency of opportunities for parent involvement that the schools offered did not significantly correlate with the actual level of parent involvement.

Research Question # 3. What is the nature of parent involvement at school for parents whose children had an Individualized Education Program (IEP) in their records in the spring of the kindergarten year, as reported by the parents at the end of kindergarten year? What factors directly predict parent involvement during the kindergarten year?

When the results are accounted for each of the seven parent involvement in school activities, the results are unbalanced, with many parents reporting no participation in specific parent involvement activities and few others reporting many activities. However, when the number of types of parent involvement that the parents chose was measured, more balanced results were obtained. Parent involvement in school, both the number of types of activities and the total number of activities parents participated in is predicted by a series of demographic characteristics such as parents' education, and family structure. In addition, parent involvement in school was predicted by parents' perception of the involvement opportunities the school offers, the learning involvement at home, and the educational expectations that parents have for their children. Interestingly, parent ethnic background does not predict parent involvement, while the language spoken at home is a predictor for *parent involvement types*, but nor for *parent involvement total activities*. The coefficients are weaker for the regression on *parent involvement total activities* variable. This could be due to the limitations of this particular measurement for parent involvement. The limitations are discussed in the Discussion section.

CHAPTER V – DISCUSSION

The threefold purpose of this study was (a) to create a profile of kindergarten-age children with disabilities in the United States, using a nationally representative sample; (b) to examine the practices that schools employ for improving the family-school connection and parent involvement in school for children with disabilities; and (c) to examine parent involvement in school for parents of kindergarten-age children with disabilities, identifying the factors that influence this involvement. Parent involvement in school has been found to be one of the key factors for the success of children's transition to kindergarten (Henderson & Berla, 1994; Henderson & Mapp, 2002), which in turn is an important predictor of future school achievement and school success. Children with disabilities represent a population of special interest because they and their families face more challenges in their school and life journeys than typically developing children. The present findings contribute to understanding the intersection of two systems in the Contextual Systems Model (CSM) framework of transition to school, the family/child system and the school system, for children with disabilities. The following sections discuss the findings of this study, grouped by research questions.

Research Question 1: Children's Profile

Percentage of Total Population

The subsample of children receiving special education services (children with IEPs, $N = 1,016$) in this study represents 4.78% of the total sample of 21,260 children from throughout United States, participating in the ECLS-K study. However, it is difficult to compare the findings of this study with the official reports on number of children with disabilities served by Special Education, for reasons further described.

The kindergarteners' age can vary considerably around the theoretical age of enrollment in kindergarten, age 5, due to several factors. First, some children miss the required cutoff date-of-birth for enrolling in kindergarten, so they need to wait one more year to enroll (e.g., in a state that has the cutoff date-of-birth on September 1, which means a child should be 5 before that date, a child whose date of birth is on September 2 has to wait one more year, and he or she will then be 6 years old when entering kindergarten). Second, some parents decide to wait one more year before sending their child to kindergarten, a practice usually referred in the literature as "redshirting." NCES reports that academic redshirting occurs at the rate of about 9% per year among kindergarten-age children (West, Meek, & Hurst, 2000). This could be especially true for parents of children with disabilities who may hope their children will "catch up" with 12 more months of maturity.

The children's age variation in kindergarten is confirmed by the present study, which found that the children's age in the fall of the kindergarten year varies not only for children with disabilities, but for typically developing children as well (see the following section). The official documents (i.e., IDEA Reports to the Congress, Census Bureau reports) report only the age distribution of children with disabilities, and not the distribution by school year (e.g., kindergartners, first graders and so on). For example, the *Twenty-Second Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act* (U.S. Department of Education, 2000) reports 256,015 children age 5 served under part B of IDEA in the 1998-1999 school year but it does not tell their grade level. On the other hand, the present study reports the percentage of *kindergarteners* with disabilities from the total sample, thus making the comparison

difficult. To have complete and more useful information about children with disabilities in the United States, it would be important to have the official reports on children with disabilities listed not only by chronological age, but also by their year in school.

Child Variables

Age

The average age of children with disabilities in the fall of the kindergarten year is higher than the average age of their typically developing counterparts. The difference is small (less than two months), but statistically significant, $t(13,996) = 12.15, p < .001$. Some disabilities have a higher average age than others (e.g., mental retardation) which was expected, as families and schools may delay these children's school entry in hopes of somewhat closing their developmental gaps from the population of typically developing children. As the children with disabilities enter kindergarten, they continue to be served under Part B of IDEA, but they usually undergo a transition from prekindergarten services for children with disabilities located within community programs such as Head Start, state supported prekindergarten programs, or child care, to the new placements for special education and related services offered by their school system (Wolery, 1999). However, as we can see from this study, the age at which the children with disabilities enter kindergarten varies considerably, and, for some of them, eligibility for the prekindergarten services might have ended before they entered the school system. The national statistics at this important time in children's lives become blurred. Have children been lost in the process? It will thus be important to gain a clearer picture of what happens to children with disabilities as they enter kindergarten and also to develop better national policies and reporting regarding this issue.

Disability Categories

The distribution by disability categories yielded some interesting findings. Speech/Language Impairment accounted for almost 70% of the children with IEPs in this study, followed by Learning Disability with about 14% (see Table 4-4). The percentages presented in Table 4-4 are calculated using non-missing data. However, for 54 cases (5.3%), the disability category was not recorded. It is also impossible to say from the dataset what the Other Disabilities category includes, although it represents a rather high percentage (15.6%). The annual IDEA reports to Congress did not report the statistics by disability categories for children under age 6 until 2002, so it is difficult to compare the findings of the present study with the official Special Education percentages. The *Twenty-Fourth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (2002)* reports the frequency table for children ages 3 to 5 served under IDEA during the 2000-2001 school year by disability. The data presented in the IDEA report differ from the findings of the present study. Speech/Language Impairment is still the most common disability among 3-5 years old, but with a lower percentage (55.1%). Learning Disabilities, which is in the second position in the present study with 13.6%, is found in the fourth position in the *Report to the Congress*, with only 3.3%. The second most common disability in the *Report to the Congress* is Developmental Delay, with 24.9%. The present study places Developmental Delay in third place, with 9.5%.

The disagreement between the data reported in the *Twenty-Fourth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act* (U.S. Department of Education, 2002) and the present study probably has several

explanations. First, is the fact that the report presents the 2000 data, whereas the data in this study were collected in the 1998-1999 school year. In the one year that passed between the two data collection points, changes may have occurred in diagnostic and eligibility criteria. Second, the data in the report presented the statistics for children ages 3 to 5, whereas in the present study the children's age ranges from 4 to 8 years old, which makes this a different population than the one in the *Report to Congress*. Third, these differences are no doubt affected by a general reluctance to apply categorical labels to 3 and 4 years olds. Developmental speech and language disorders are usually the first indication of a variety of disability areas, including Learning Disabilities and Mental Retardation (Batshaw, 2002). The older population is likely to have more categorical labels since some school districts are reluctant to use the label Developmental Delay once children have entered kindergarten.

Gender

One finding of particular note is that 65% of the kindergarteners with IEPs were males. This was a fairly surprising finding, for the investigator didn't expect to find gender disproportion. After the results showed this gender disproportion in the sample of children with disabilities studied, a literature search on gender and children with disabilities was performed to explain this particular finding. The literature and official reports confirmed indeed that boys are, roughly, twice as likely as girls to receive special education services (U.S. Department of Education, 1999).

The disproportion in referral for and receipt of special education between boys and girls is reported in European countries as well (Gissler, Järvelin, Louhiala, & Kemminki, 1999; Skårbrevik, 2002; Vardill & Calvert, 2000). This disproportion is not

fully understood. Several hypotheses have been proposed. As the *Twentieth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act* (U.S. Department of Education, 1999) states, “It is likely that no single explanation accounts for all of the disproportion but that combinations of factors result in the distribution previously described” (U.S. Department of Education, 1999, p. II-27). Three possible theories have been proposed to explain the gender differences for special education identification rates (Coutinho, Oswald, Best, & Holzwarth, 2001; Coutinho, Oswald, & King, 2001; Skårbrevik, 2002; Tschantz & Markowitz, 2003; U.S. Department of Education, 1999; Wehmeyer & Schwartz, 2001). Coutinho, Oswald, and King referred to the hypotheses as the “three Bs”: biology, behavior, and bias.

The first hypothesis asserts that this difference might be due to biological differences between boys and girls. Boys tend to be more prone to having disabilities due to genetic causes (Hagerman, 1997; Harmon, Stockton, & Contrucci, 1992; Reschly, 1996). Also, physiological and maturational differences between males and females may cause higher rates of disabilities among boys, leading to the difference in disability prevalence between boys and girls. The second hypothesis, “behavior,” suggests that the difference in the behavior of boys and girls is the cause for the disproportionate referral for and receipt of special education services. According to this theory, boys “are more likely to have higher activity levels and exhibit behaviors that do not conform to classroom regimens, and as such may be admitted to special education for those reasons” (Wehmeyer & Schwartz, 2001, p. 31). The third hypothesis asserts that this disproportion is due to the teachers’ bias in special education referral (Coutinho, Oswald, & King, 2001; Wehmeyer & Schwartz, 2001), resulting from different expectations that teachers have

for boys and girls, sex role stereotyping, and sex-typed modeling. Related to this issue is the fact that, especially in early education, women outnumber men as teachers. Female teachers may be more likely to identify boys' learning styles and behaviors as reflecting a disability, thus increasing the referral of boys for special education (Wehmeyer & Schwartz, 2001). Assessment may be biased too, especially in regard to referral for emotional disturbances. The assessment tools may fail to capture depression, suicidal ideation, and suicidal attempts, which are more common in girls than boys, thus leading to underreferral girls for special education (U.S. Department of Education, 1999).

The literature has reported that the gender disproportion in special education varies across different disability categories. The categories with the most disproportionate distribution are Learning Disabilities and Emotional Disturbances (U.S. Department of Education, 1999). This disproportion was confirmed by the present study. Additionally, the present study found a big gender disproportion for the Speech/Language Impairment category.

The findings of the present study, confirming the literature on gender disproportion in special education, are important for several reasons. First, as mentioned before, the present study is using a nationally representative sample, which means that the findings can be generalized to the total population of kindergartners with disabilities in the United States. Although gender disparity in special education is frequently discussed in the literature, the Office of Special Education Programs (OSEP) does not collect its annual disability data disaggregated by gender, nor does the Census Bureau. Also, IDEA does not mandate the states to monitor and report on gender distribution of students in special education. The findings of the present study add additional support to

the suggestion that the data collected and reported on children with disabilities should be counted by gender in addition to race/ethnicity. Second, this study finds a great disproportion between boys and girls for Speech/Language Impairment, with 68.1% boys and 31.9 girls. This is an interesting finding considering that the literature does not report such a disproportion. This finding requires further investigation. One explanation could be that the literature on gender disparity generally deals with school-age children. In the sample studied here, the children are at kindergarten age, and many of them have been identified as eligible for special education before entering kindergarten. Many young children do have communication challenges, but at this age this skill area may also be the first indicator for additional problems that may subsequently lead to other categories for service. Speech impairment may also be the category of recourse when diagnosticians require further observations to correctly label a child's disability.

Race

The overall distribution by race for kindergartners with disabilities showed differences from the distribution for the typically developing children subsample of the same dataset. The differences are not large, but they are statistically significant. However, comparing the differences within each ethnic group, the only significant difference was found for the Asian group, which has a higher representation in the typically developing children subsample. Proportionally, there are more than twice as many Asian typically developing children than Asian children with disabilities. Other than the difference for the Asian group, the racial distribution for children with disabilities looks quite similar as the racial distribution of typically developing children. The statistical significant difference might be due, on one hand, to the difference for the Asian group, and on the

other hand to the big sample sizes analyzed. It was expected to find a greater disproportion of the race distribution of children with disabilities, as presented in the review of the literature section. However, from the present data we can see that this disproportion is not that big for younger children. As they enter kindergarten and during the kindergarten year, the racial distributions of children with disabilities and typically developing children are comparable. Once in school it seems that the disproportion in racial distribution appears. Is the referral process more biased in the school system or slower to operate for some groups prekindergarten? This is a question that merits further study.

Other child variables yielded some interesting findings. The sample of children with disabilities has a smaller proportion of children that have another language than English at home (7.9%), compared with typically developing children (11.4%). Knowing that almost 70% of children with disabilities fall under the Speech/Language impairment category, probably the explanation is that English-speaking children are more likely to be referred and diagnosed with Speech/Language disorders than non-speaking English children, for whom a possible language impairment might be hidden by the challenge of learning a second language.

Another child variable studied is the type of prekindergarten child care the children attended. More children with disabilities participated in Head Start programs and fewer in center-based programs than typically developing children. This is not unexpected, knowing that Head Start is a national program that offers comprehensive, no-cost services for children with disabilities (the Head Start program is required to enroll at least 10% children with disabilities).

Language

It was interesting to find that, proportionally, there are fewer children with disabilities whose primary language is not English than typically developing children. The difference is statistically significant. Combined with the fact that almost 70% of the children in the sample fall under Speech/language Disability, it is possible that this difference is due not to a really difference in disability prevalence among non-English speakers, but to a difference in referral. It is plausible to think that non-English speakers' language problems are more likely to be attributed to the fact that the child is still learning than to a speech problem. On the other hand, a child who has English as a primary language but has speech/language problems is easier to spot and more likely to be referred to special education.

Family Variables

Socio-economic Status and Poverty

Regarding the poverty level, almost 27% of the subjects in this sample live in families in the lowest quintile of the socio-economic status, compared with 16.0% of typically developing children. Moreover, 25.5% children with disabilities live under the poverty level, compared with 16.3% of typically developing children. It is clear that children with disabilities are more likely to be poor than typically developing children, a fact confirmed by other studies. The *Twenty-Fourth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act* (2002), using the same dataset and subsample as the present study, had similar findings, although it calculated the poverty level differently. According to the *Report*, the percent of kindergartners with IEPs who were poor was significantly higher than the percent of children with disabilities

(U.S. Department of Education, 2002). The percentage for typically developing children is in concordance with the figures for the general population, which assert that 17% of children live in poverty (Annie E. Casey Foundation, 2003).

School Variables: School Size and School Type

A majority of kindergartners with disabilities go to school in rather large schools; almost 70% of the children in this sample attend schools that enroll 300 or more students. The school size distribution for children with disabilities is similar with the same distribution for typically developing children. This fact might be an indicator of the more recent trend of inclusion of children with disabilities in typical classroom. However, for children with disabilities, transition to a big school, with many other children on site, may have quite serious negative influence, especially for those children coming from considerably smaller prekindergarten settings. The impact of school size for children with disabilities merits additional research and also attention by practitioners charged with orienting new kindergarteners.

The types of schools that children with disabilities attend are slightly different from the schools attended by typically developing children. Although most of the children, with or without disabilities, attend public schools, there are, proportionally, more children with disabilities attending public schools (89.6%) than typically developing children (73.3%). Conversely, there are more typically developing children attending private schools, especially Catholic schools (12.4%), than children with disabilities (3.1%). This is not a surprising finding, knowing that there are more children with disabilities living in low-income families than typically developing children. Another fact that might contribute to this difference may be that families of children with

disabilities prefer to enroll their children in public schools, were they may be more likely to receive services.

The last variable in the children's profile is a community variable, which is urbanicity. Children with disabilities are more likely to live in small communities than typically developing children. This might be caused, on one hand, by the fact that the families of children with disabilities living in small communities are less likely to move to big communities even if they could; they might rather remain where they know the services and are integrated into the community. On the other hand, families of children with disabilities from big cities might decide to move to a smaller community, for they here can get more social support. Another possibility is that disabilities are discovered earlier in smaller towns, where children are less anonymous than in bigger cities

Research Question # 2: School Practices for Parent Involvement and Easing Transition to Kindergarten

The practices that schools employ to ease transition to kindergarten for children with and without disabilities are important elements of the school-family partnership model, which is an important component of the transition to kindergarten model (Pianta & Kraft-Sayre, 2003). The present study showed that the great majority of teachers report some type of practices for facilitating the transition to kindergarten. The most frequent practice reported by the teachers is sending home information about the kindergarten program (87.2% of the teachers), followed by parents and children visiting kindergarten prior to the start of the school year (81.8%), and orientation offered to parents (80.5%). These findings confirm what other authors have found: the most common practices the schools employ to ease transition to kindergarten and to improve parent involvement are

low-intensity types of activities which happen mostly at school, or in a school-to-home direction (e.g., flyers sent home, open houses and orientations at school) rather than activities targeted specifically to individual parents' and children's transition to kindergarten and the problems they may face (Love, Logue, Trudeau, & Thayer, 1992; Pianta, Cox, Taylor, & Early, 1999). Home visits were reported by only 5.3% teachers, and more than half (52.3%) of school administrators reported that their school never offers home visits as an available activity for parent-school connection.

Another interesting finding is that there is a low correlation, if any, between the school administrators' report of parent involvement activities offered and the same activities the parents report participating in (e.g., there is no significant correlation between the number of parent-teacher conferences offered during the academic year, as reported by the school administrator, and the parent participation in parent-teacher conferences during the kindergarten year as reported by the parents in spring; the same is true for PTA/PTO meetings). Table 4-8 in the Results section shows these correlations.

It seems that schools could do more in terms of creating a school-home connection in a way that is beneficial for the parents and their children, as well as purposeful for schools. From the present data it appears that in kindergarten the family-school contact becomes more formal and more problem-oriented than in preschool and that schools are still practicing the traditional approach ("fulfilling the school agenda") in family-school connections. As Pianta and his colleagues said, "If the national goal of 'ensuring that all children enter school ready to learn' depends in part on 'ready schools,' then there is considerable work to be done with respect to ready schools that ensure 'smooth transitions between home and school' and 'continuity between child care and

school experience” (Pianta, Cox, Taylor & Early, 1999, p. 85). Further, the investigator would argue that effective school practices in connecting the new school with the families are even more important for children with disabilities and their families than for typically developing children.

Research Question # 3: Parent Involvement

Parent Involvement Activities

The results related to parent involvement in school yielded some interesting findings. The frequency distribution for each parent involvement category is very unbalanced. For three out of seven parent involvement categories more than 50% of the parents reported no involvement at all. For another three categories, more than one third of the parents reported no participation. One might perceive very limited parent involvement from these data. However, measuring how many types of parent involvement activities parents reported participating in yielded more balanced findings. Parents reported participation in an average of 3.5 activities (out of 7), with a standard deviation of 1.65. This finding is important in showing that parents tended to become involved in some types of parent involvement activities, but not in all types, and they chose different types. The activity with most parents reporting participation is *parent-teacher conferences*, with only 12.5% of the families of children with disabilities reporting no participation. The activity with least parent involvement is *participating in parent advisory groups or parent policy council meetings* (80.4% of the parents reporting no participating), followed by *participating in PTA/PTO meetings* (62.9% of reporting parents with no participation). A conclusion that can be drawn is that, in order to have more parents of children with disabilities involved with school and to address different

parental inclinations for involvement, the school should offer a large menu of opportunities for meaningful parent participation because different parents will opt for different activities.

Of particular interest is the fact that the *parent teacher conferences* variable, while the most frequently reported parent involvement activity, still has 127 parents (13.8%) reporting no participation at all. Moreover, another 27.5% of the parents reported participation in only one parent-teacher conference during the kindergarten year. That adds up to more than 40% of parents with minimal participation in parent-teacher conferences, even though for parents of children with disabilities parent-school partnership in program planning and implementation is strongly encouraged by the IEP process of the IDEA. It is indeed noteworthy that many parents in this nationally representative sample chose not to participate at all in a parent-teacher conference, or to participate in only one meeting. This high percentage may be partially attributed to the fact that some IEP meetings may have been scheduled for after the interview (the spring interview was conducted over a period of time during the spring term, but not after the school year finished) or to the respondents' misinterpretation of the question, but still, the percent is high and alarming. Parent teacher conferences are supposed to foster the closest and most personal of relations between school and families. These data signal that the school-family partnership model for children with disabilities is not fully implemented in practice, even in kindergarten.

Parent Involvement Variables

Two parent involvement variables have been created to be used in the linear regression. These two parent involvement variables, although both measure parent

involvement in school, are quite different in how they measure parent involvement. While one variable is more of a quantitative type variable, measuring the total number of parent involvement activities the parents participated in during the kindergarten year, without differentiating among them, the other is more of a qualitative variable, measuring the number of types of activities the parents chose to participate in during the kindergarten year, without accounting for the total amount of parent involvement in school.

The quantitative measurement (*parent involvement total activities*) has several limitations. First, it has a non-normal distribution, even created after eliminating the outliers. That makes difficult any interpretation of a statistical technique that requires normal distribution (such as linear regression). The process itself of eliminating outliers distorts the real data. The parents that had answers considered as outliers might have some things in common. Eliminating these cases created a new set of missing values that are not missing at random. Another limitation is the fact that the variable that uses the total number of parent involvement activities is prone to measurement errors. The constant presence of outliers and the higher frequency of “round numbers” in the frequency tables (e.g., reporting 10, 15, 20, 25 activities, see Table 3-1) suggest that the parents did not understand the question and/or the parents reported only a approximation rather than the exact number of activities they participated in.

Measuring the number of types of activities the parents chose to participate in is less prone to measurement errors (I would expect a parent not to remember very well the number of school events participated in, for example, but to remember whether or not participated at all). The variable measuring the number of types of parent involvement

has a normal distribution, making the interpretation of the regression coefficients more valid. Its limitation is that it is not sensitive to the volume of parent involvement in school, and it doesn't differentiate between two parents who, for example, both participated in four types of activities, but one parent participated in a total of 30 activities while the other participated in only 7 activities.

Nevertheless, the regressions with both parent involvement variables yielded similar results: parent education, family structure, parent's expectation for child's school achievement, involvement at home and parent's perceptions of opportunities offered by the schools are significant predictors for parent involvement at school. Child's gender, child's age, family income and family ethnicity are not significant predictors for parent involvement. Language spoken at home is significant in predicting how many types of parent involvement activities parents choose to be involved in, but not for the total amount of parent involvement at school.

Parent Involvement Predictors

Most of the predictors for the school involvement of the parents of children with disabilities were in the expected directions. The results of this study found that parents who are more educated, have a partner or a spouse, are more involved with their children at home, and have higher expectations for their children tended to be more involved with their children's school. Notably, being in a specific ethnic group was not a significant predictor for parental involvement in school for any socio-economic group. Rather, having English as the primary language at home significantly increases parent participation in regard with the number of types of parent involvement activities (but not the total number of parent involvement activities). This could be explained by the fact

that parents that speak other language at home than English might not feel confident enough to be involved in specific types of parent involvement activities, especially those that are put the parents in a leadership or advocate position, such as participating in PTA meetings, or parent advisory council. It would be interested to study parent involvement for each type of activity and maybe combine with some qualitative methods data.

Parent involvement at home was shown here to be a strong predictor for parent involvement at school. These two types of parent involvement are known to strongly predict for children's future school achievement and school success (Henderson & Berla, 1994; Henderson & Mapp, 2002). This is another point where schools can have a big influence, informing parents of the best ways that they can encourage their child's education at home. Unfortunately, it seems that teachers are rarely aware of this type of parental contribution and have limited knowledge of the parents' involvement at home (Baker, Kessler-Sklar, Piotrkowski, & Lamb Parker, 1999). A note of caution should be made here: The strong correlation between parent involvement at home and parent involvement at school shows that if parents are involved or highly involved at school they are likely to be involved educationally at home as well. However, it doesn't mean that parents who choose not to be involved at school are therefore not involved at home, nor that being involved with learning at home necessarily causes the parents to be involved at school.

Another important finding is that the parents who perceived the school as offering more information and opportunities for involvement were more involved with the school. For the schools this means that it is very important not only to offer opportunities for the parents to become involved, but also to make sure that the message is broadly

disseminated in a variety of ways and correctly perceived by the parents. From the school administrators questionnaire it seems that generally schools offer a wide range of opportunities for the parents to be more involved with the school. However, this number of opportunities for the parents to be involved that the schools are offering does not correlate with the actual involvement that parents reported. Moreover, parents of children with disabilities participate in fewer parent-teacher conferences than would be expected. We can see a picture of schools and parents being less than fully engaged with each other. Probably many of the parents who do choose to become involved with the school are doing so because they believe that they have an important role to play in their child's education and that their actions fulfill a normal parental role. This is consistent with Hoover-Dempsey and Sandler's theory of parent involvement; namely, the invitations and demands from the school to get involved are important factors influencing parent involvement, but this factor is facilitative, and neither necessary (i.e. parents with a well developed and positive sense of parental role and a strong sense of self-efficacy will be involved regardless of whether they are invited or not) nor sufficient (i.e. schools do not have power by themselves to create either positive parental roles or self-efficacy). It will be important for the schools to make sure not only that they offer a broad range of involvement opportunities to the parents, but also that the message gets to the parents in a way that they understand it and act on it.

Limitations of the Study

This study examined a nationally representative sample of children with disabilities (one of the few studies, to our knowledge, doing so), and it used a very well constructed dataset. Nevertheless, there are several limitations to the study. First, the

ECLS-K dataset used in this study was not specifically designed to look at children with disabilities. Thus it did not address several aspects of particular interest for children with disabilities, such as the severity of the disability. Second, the ECLS-K dataset did not oversample for children with disabilities, meaning that this subpopulation accounts for a small percentage of the full sample, leading to a situation in which some disability categories are represented by only a few subjects and thus are insufficient for conducting an analysis by disability category. Third, children with some disabilities were omitted from the study due to their inability to respond. These included children who were deaf/blind and children with severe communication impairment. Fourth, the parent interview related to parent involvement in school was not specially designed for parents of children with disabilities. As a result, some particular aspects of parent involvement that are relevant for parents of children with disabilities were not addressed in the interview. For example, parental experiences with the IEP were not explored. Also, the school administrators' reports on parent involvement opportunities their school offer might reflect only the general policy of the school for this type of activities, and not the special policies they might have for parents of children with disabilities. Nevertheless, the analyses of this study yielded interesting findings, especially considering the fact that, using the correct sampling weights, these results can be generalized to the entire 1998 population of kindergarten-age children with disabilities.

CHAPTER VI - CONCLUSIONS

This study was a first step in trying to understand a nationally representative dataset concerning the population of kindergartners with disabilities in the United States as well as the parent involvement with school for their families as a key component of the larger picture of transition to kindergarten. The population of kindergarten-age children with disabilities has some specific characteristics, some of which are consistent with the general child development literature. The findings of this study confirmed previous findings regarding school practices and parent involvement in school. Family demographic characteristics, parents' perceptions of opportunities offered by the schools, parents' expectations for child's education, and parental educational involvement at home are all significant predictors of parent involvement. Children's characteristics studied were not found as significant predictors for parent involvement. However, there are more child characteristics that could be considered such as personality, temperament, or school readiness, however that might be defined, that could be considered in a similar study.

The results of this study are promising in terms of creating a more complete picture of the transition to kindergarten of children with disabilities. Further studies are needed to understand this important element in school success. Among the recommendations for further studies are the use of a more complex design, perhaps using Structural Equation Modeling with this dataset to group the complexity of parent involvement as part of the more complex system of child, family, school, and society. Other elements of the CSM model beg to be tested. Also, longitudinal studies should be employed with later data from this large longitudinal study to determine the long term patterns of parent involvement as well as the correlations of parent involvement with

child's school achievement and well being. New data should be collected to amplify on aspects of these findings that are limited by the structure of the dataset.

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APPENDICES

APPENDIX A

Extract from Fall Teacher Questionnaire

Transition to kindergarten activities

In some schools, special efforts are made to make the transition into kindergarten less difficult for children. Which of the following are done in your school?

- a. I (or someone at the school) phone or send home information about the kindergarten program to parents.
- b. Prekindergarteners spend some time in the kindergarten classroom.
- c. The school days are shortened at the beginning of the school year.
- d. Parents and children visit kindergarten prior to the start of the school year.
- e. I (or another teacher) visit the homes of the children at the beginning of the school year.
- f. Parents come to the school for orientation prior to the start of the school year.
- g. Other transition activities (PLEASE DESCRIBE) (U.S. Department of Education & National Center for Educational Statistics, 2003).

The codes are:

1 = yes

2 = no

APPENDIX B

Extract from School Administrator Questionnaire (Spring)

School Policies for Parent Involvement

Please indicate how often each of the following activities is provided by your school. CIRCLE ONE NUMBER ON EACH LINE.

- a. PTA, PTO, or Parent-Teacher-Student organization meetings
- b. Letters, calendars, newsletters, etc., sent home to provide parents with information about the school.
- c. Written reports (report cards) of the child's performance sent home?
- d. Teacher-parent conferences.
- f. Home visits to do one-to-one parent education
- f. School performances to which parents are invited.
- g. Classroom programs like class plays, book nights, or family math nights
- h. Fairs or social events planned to raise funds for school
- i. Workshops for teachers that focus on parent involvement
- j. Other (please specify) (U.S. Department of Education & National Center for Educational Statistics, 2003).

The codes for these questions are:

1 = *never*,

2 = *once a year*,

3 = *2 to 3 times a year*,

4 = *to 6 times a year*,

5 = *7 or more times a year*.

APPENDIX C

Extract from Parent Spring Interview

Home Involvement Activities

In a typical week, how often do you or any other family member do the following things with the child?

- a. Read books to {CHILD}
- b. Tell stories to {CHILD}
- c. Sing songs with {CHILD}
- d. Help {CHILD} to do arts and crafts
- e. Involve {CHILD} in household chores, like cooking, cleaning, setting the table, or caring for a pet
- f. Play games or do puzzles with {CHILD}
- g. Talk about nature or do science projects with {CHILD}
- h. Build something or play with construction toys with {CHILD}
- i. Play a sport or exercise together with {CHILD} (U.S. Department of Education & National Center for Educational Statistics, 2003).