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Predicting Low Income Children's Kindergarten Readiness: An Investigation of Parents' Perceptions of Their Children's Development and Connections to the Educational System

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Predicting Low Income Children's Kindergarten Readiness: An Investigation of Parents' Perceptions of Their Children's Development and Connections to the Educational System

by

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ABSTRACT

The current study sought to explore the relationship between four parent variables and children's Early Screening Inventory-Kindergarten (ESI-K) scores among families from low socioeconomic status backgrounds. The four parent variables were 1) parents' perceptions of school readiness, 2) parents' education, and 3) parents' attitudes towards their child's school, 4) the child's early development. The participants were 63 parents and their kindergarten children from three schools in Hillsborough County Florida. Results showed that parents are relatively good predictors of their children's readiness for school, with that variable alone accounting for 18% of the variance in ESI-K scores. The four variables together explained 41% of the variance in children's ESI-K scores. Implications for educators with regard to helping low-income families prepare their children for formal schooling are discussed.

Chapter One
Introduction

The Problem and Its Context

The issue of children's readiness for school and the measures used to predict children's competencies in the early school years have been a focus of increasing interest among educators (May, Kundert, Nikoloft, Welch, Garrett, & Brent, 1994; La Paro & Pianta, 2000). This focus also has received considerable attention from researchers, other professionals interested in children's growth and development, and parents/caregivers, especially in light of the first National Education Goal—"to ensure that all children enter school ready to learn by the year 2000" (National Education Goals Panel, 1995).

Results from school readiness screenings are used to make important educational decisions for children, such as identifying children at risk for later school/academic failure and children who should be offered early intervention and prevention assistance (Meisels, 1999; Pianta, 1990). Researchers generally agree that early intervention for children experiencing learning difficulties results in fewer educational problems in the future (Colarusso, Plankenhorn, & Brooks, 1980). It is important that readiness screeners not be used for placement decisions (i.e., for entry into the special education system) but rather for identifying students who may be at risk for educational failure and who may benefit from appropriate early interventions. The main purpose of readiness tests should be to predict who is ready for formal entry into academic instruction and who profit from

either remedial or compensatory educational programs in which readiness skills or processes are developed (Salvia & Ysseldyke, 1991).

Predicting Risk for Early School Failure

Researchers have reported many factors that affect children's readiness for school including: (a) exposure to academic materials in the home (e.g., educational games, blocks, educational toys), (b) exposure to printed materials in the home (e.g., early experiences with books and reading), (c) good physical health, and (d) support from caregivers. Several of these factors have shown strong relationships to socioeconomic status, and socioeconomic status continues to be a powerful predictor of academic success for children in the United States (Zill, Collins, West & Hausken, 1995). Importantly, although it is clear that children from low-income homes are at greater risk for early school failure than their peers from higher income homes, the research does not indicate that this is because low-income parents do not value education or try to prepare their children for school. For example, Moles (1993) reported that low-income parents expect their children to be successful in school and would like to participate in academic activities with them. McCaleb (1995) also noted that although many low-income parents (particularly those born outside of the U.S.) place high importance on education for their children, they may not know how to assist them in being successful.

The fact that low-income parents may not be aware of how to best prepare their children for school is important in light of the fact that Carlton and Winsler (1999) have argued that a child does not merely grow into readiness for school but must be exposed to situations and carefully assisted by others to develop the necessary skills and ways of functioning to be successful in the school environment. As such, parental beliefs,

behaviors, expectations, and home environment all play an important role in school readiness. Numerous studies have linked scores obtained on measures of school readiness skills to learning activities in children's home environments (Parker, Boak, Griffin, and Ripple, 1999). In addition, home environments have a tremendous influence on the development of young children's emergent literacy and early school achievement (Storch and Whitehurst, 2001).

An interesting outgrowth of the research on the linkages between home environment and school readiness is research focusing on how parents prepare their children for school. What do parents think children need to know in order to be ready for school? This question was addressed in a study by Piotrkowski, Botsko, & Matthews (1999). Overall, findings from this study showed that parents typically place more emphasis on academic readiness skills (e.g., knowing numbers and letters) while teachers place more emphasis on behavioral readiness skills(e.g., being able to sit still and listen).

Currently, many questions remain about factors relating to school readiness among children from low-income families. In particular, variables like low-income parents' perceptions of their child's readiness for kindergarten, their own educational experiences, their relationships with their child's school, and their child's developmental history merit further investigation. The question of perceptions of readiness for kindergarten among low-income parents is particularly important. Do low-income parents know—even before they send their child to kindergarten—what behavior and academic skills their child needs to be successful in the classroom? Do they recognize when their child may not be ready for kindergarten (in terms of what the school expects from a child who is age eligible)? Understanding how low-income parents' perceptions

and experiences with schooling impact their child's school readiness can help schools to design more effective ways to reach out to these parents and work with them to prepare their children to be successful in the early school years.

The Current Study

The purpose of the current study is to examine how family differences, including parents' perceptions of a child's readiness for school, are related to low-income children's scores on a kindergarten readiness screening measure. In this study, the kindergarten readiness screening measure that was used is the Early Screening Inventory-Kindergarten Revised (ESI-K). The ESI-K is a readiness measure used in the state of Florida to assess kindergartners' readiness for first grade. The measure consists of a combination of 25 activities, each of which corresponds to one of three domains: Visual-Motor/Adaptive, Language and Cognition, and Gross Motor Development. In Hillsborough County students' ESI-K scores are totaled to indicate one of three levels of readiness: N (Not Ready), G (Getting Ready), or R (Ready). Questionnaires completed by parents provided information on parents' perceptions of their child's readiness for kindergarten, their perceptions of their own educational experiences, their child's early development, and the child's and parents' demographics. Students were recruited from 10 kindergarten classrooms in Hillsborough County.

Research Questions

1. What percentage of low-income children score within the Ready, Getting Ready, and Not Ready categories on the ESI-K?

2. What is the relationship between a child's overall ESI-K score and his/her:
    a. Race/ethnicity?
    b. Parent's race/ethnicity?
    c. Parent's length of time in the U.S.?
    d. Family's dominant language at home?
    e. Parent's highest level of school completed?
    f. Early childhood development?
    g. Parent's perception of child's readiness for kindergarten?
    h. Parent's recollection of his/her own educational experiences?
    i. Parent's feelings about the child's school?
3. Of the parent variables listed above, which best predicts low-income children's scores on the ESI-K?

Chapter Two

Review of the Literature

School readiness measures continue to be powerful predictors of cognitive and motor competencies and academic success of young American children. Results from screening measures are used mainly to develop informed educational plans for children and to identify children to whom early preventive intervention should be offered (Pianta, 1990; Lamberty & Crinc, 1994). The environmental factors that influence readiness include family beliefs and behaviors surrounding education (e.g., parents' educational experiences and beliefs about education and how they transmit them to their children), home environments (e.g., books or toys that teach letter and number concepts), socioeconomic status, and cultural values (how children are encouraged to view their worlds and interact with others).

This chapter reviews the research findings in the broadly defined area of school readiness. The chapter is organized into the following sections: (a) definitions and conceptualizations of school readiness, (b) school readiness screening in the state of Florida, (c) differences in children's performances on school readiness measures, (d) stressors faced by low income families, (e) importance of the home learning environment, and (f) differences among parents' beliefs and behaviors among different ethnic and cultural groups in the United States.

Definitions of School Readiness

Researchers have provided numerous definitions and conceptualizations of school readiness. Lewit and Baker (1998) proposed that school readiness is based on the physical, intellectual, and social development that enables a child to fulfill school's requirements and to assimilate a school's curriculum. Carlton and Winsler (1999) suggested that there are two concepts related to school readiness, readiness to learn and readiness to perform in the classroom. They further stated that readiness to learn is viewed as a level of development at which an individual is able to learn specific material.

Carlton and Winsler's (1999) conceptualization of school readiness was supported by Piotrkowski, Botsko, and Matthews (2000), who suggested that for the individual child, school readiness refers to the personal readiness resources or "human capital" that a child brings to school to help him or her adapt successfully to the challenges of kindergarten. Parker, Boak, Griffin, Ripple, and Peay (1999) also noted that school readiness is a multidimensional concept that considers behavioral and cognitive aspects of the child's development as well as the child's adaptation to the classroom.

The concept of school readiness and a child's eligibility requirements for school entry include all dimensions reported by the above researchers. Most would agree that each dimension is an essential element of a child's school readiness. The National Goals Panel (1995) suggested that school readiness should include the dimensions of health and physical development, emotional well-being and social competence, approaches to learning, communicative skills, and cognition and general knowledge. Although all of these dimensions have been noted by researchers, individuals still vary with regard to

what they believe should be included as the primary factor in determining children's readiness for school (Saluja et al. 2000).

Although numerous definitions and conceptualizations have been noted in the literature, the definition of school readiness remains highly controversial among parents, schools, and policy makers. Graue (1992) reported that some parents assume that readiness comes with a child's fifth birthday, while others relate readiness to the mastery of academic skills, such as learning/writing the alphabet and counting. Rimm-Kaufman, Pianta, and Cox (2000) stated that many teachers generally relate readiness to a child's conduct and his/her ability to follow directions. On the other hand, Heaviside and Farris (1993) related readiness to children being physically healthy, rested, and well-nourished.

Based on the definitions reported in the literature, all researchers agree that specific dimensions are important to consider when assessing children's readiness skills. However, important questions remain including: Which dimensions are of primary concern for children's early school achievement? How can important dimensions be integrated to form a sole definition of readiness for all states/schools? A sole definitive description of what relates to readiness for school could give parents and educators guidance with regard to early intervention strategies for preparing children for successful adaptation to the school environment and routine.

School Readiness Screening in Florida

The mission of the Florida Partnership for School Readiness (School Readiness Act; 411.01, FL) is to foster collaboration and systematic change through local school readiness coalitions and to ensure that all children are emotionally, physically, socially, and intellectually ready to enter school and ready to learn. The three major goals of the

partnership are to: (a) administer school readiness program services that help parents prepare eligible children for school, (b) coordinate the provision of school readiness services on a full-day, full-year, full-choice basis to the maximum extent possible in order to enable parents to work and be financially self-sufficient, and (c) establish a uniform screening procedure to be implemented by the Department of Education and administered by school districts upon entry of children into kindergarten to assess readiness for school of all children (Florida Statutes, 2001). The new School Readiness Uniform Screening System (SRUSS) is a program developed and implemented by the State of Florida's Department of Education. This system was implemented to provide a uniform screening process for public school districts to use in assessing children's readiness for school. The SRUSS includes several developmentally appropriate instruments that provide objective information about students in kindergarten.

The Early Screening Inventory-Revised (ESI-R) is one of those instruments. The ESI-R is a brief developmental screening instrument that is individually administered to children from 3 to 6 years of age. It is designed to identify children who may need intervention in order to perform successfully in school. This revised version of the ESI includes two forms that are sensitive to differences between age groups. The preschool version (ESI-P) is designed to screen children ages three to four and one half years old. The kindergarten version (ESI-K) is designed to screen children four years-five months-sixteen days to six years of age.

The ESI-R provides a quick overview of a child's development in three major areas: visual-motor/adaptive, language and cognition, and gross motor. Although the three sections are designed to assess a child within a particular area, recommendations are

based on a composite score across the three areas. Three options are available based on the total ESI-R score (a) OK/Ready, (b) Re-Screen/Getting Ready, and (c) Refer/Not Ready. Children who score in the Ready category are presumed to be developing normally and are not in need of further assessment. Children scoring in the Getting Ready category have marginal ESI-R scores, and the instrument should be re-administered to them in eight to ten weeks unless the child is very young (e.g., three years old). In this case, the re-screening be delayed until the child is three years six months or older because at this point children are less likely to refuse on-demand testing. If a child's score falls in the Not Ready category, s/he would be evaluated by an assessment team, and if the problems identified in the screening are confirmed, a definitive plan of action should be designed and implemented.

Research on School Readiness

There is a wealth of research examining relationships between demographic variables (age, ethnicity, and gender) and children's readiness scores. Ellwein, Walsh, Eads, and Miller (1991) conducted a study in which they examined children's performance on the Brigance K & 1 Screen, the Daberon Screening for School Readiness, Developmental Indicators for Assessment of Learning-Revised (DIAL-R), and the Missouri Kindergarten Inventory of Developmental Skills (KIDS). Based on the data collected, these researchers reported that boys, minorities, children of low socioeconomic status, and young children consistently scored lower on the readiness measures included in the study. These researchers also looked at the degree to which total scores differed according to gender, ethnicity, SES, and age cohort. They found that child characteristics were related to differences in readiness test performance. Specifically they

reported that Blacks consistently scored lower than Whites on the Brigance, the Daberon, and the Kindergarten Inventory of Developmental Skills (KIDS). There were no comparisons reported for the DIAL-R because no minorities were included in the administration of this measure. The discrepancy was the greatest on the KIDS, on which White children scored over one standard deviation higher than Black children. In addition, minorities scored .63 SD lower on the Brigance and .13 SD on the Daberon. Additionally, poorer children scored lower than their non-poor counterparts on every test, although the differences were not statistically significant. Poor children averaged one standard deviation lower on the Daberon, .69 SD lower on the Brigance, and .56 SD lower on the DIAL-R. In addition, on the four measures used in this study, older children scored consistently higher than their younger peers, and children born in the winter scored from .81 SD to 1.39 SD higher than children born in the fall. These researchers concluded that based on differences in children's characteristics (i.e., age, gender, race), readiness assessments are not valid measures to predict children's future performance. They also argued that educators must reexamine the premises on which readiness test are based, as well as how they are used.

It is very important for educators to understand what may be the most influential factors contributing to differences in the school readiness scores of children. Hill (2001) conducted a study on the relationship between parenting and children's school readiness. These variables were examined within socioeconomically comparable samples of African American and Euro-American kindergarten children, mothers, and teachers. Participants were 54 African American and 49 Euro-American kindergartners and mothers enrolled in the public school system in a southeastern semi-urban city. Mothers of the kindergarten

children were interviewed in their homes during the second half of the kindergarten year. Children's and mother's ages were not significantly different across ethnic groups. Similarly, parent's educational levels and employment statuses were not significantly different across ethnic groups.

Hill (2001) assessed the children's school readiness using the pre-reading and pre-math subscales of the Metropolitan Readiness Test (MRT). Parenting, as it relates to affective relationship and disciplinary strategies, was measured using the Children's Report of Parenting Behavior Inventory (CRPBI). Parental involvement was assessed using the Parent-Teacher Involvement Questionnaire (PTIQ). Additionally, three questions were developed for the study to assess parent's expectations of their children's short–term and long-term academic success.

The data were analyzed using regression equations (Hill, 2001). Two regression equations were used to examine the relationships between ethnicity, family income, children's scores on quantitative concepts and sound-letter correspondence, and the interaction of ethnicity and family income. To determine the relationship between parenting practices and school readiness and the moderating role of family income, two additional regression equations were conducted with the parenting variables. These researchers found that being from a higher income family and being Euro-American were associated with higher quantitative concepts scores. On the other hand, the researchers unexpectedly found that, among low-income families, inconsistent parenting practices were related to better pre-reading performance. Why this finding emerged is not clear.

With regard to parental expectations and school readiness, findings showed that high expectations were significantly related to pre-reading scores. The relationship

between the PTIQ and school readiness and the moderating role of ethnicity were examined as well. Results showed that parental involvement at home and teachers' perceptions of parents' valuing of education were positively related to quantitative concepts for Euro-Americans but showed a zero-order relationship for African Americans. However, there was a positive relationship between involvement in school activities and quantitative concepts for African Americans and a negative relationship for Euro-Americans. No findings were reported for the relationship between reading and parent involvement. The findings from this study suggest that differences in parenting practices vary based on ethnicity and family income; thus, different parenting strategies may relate to different academic outcomes for children from different socioeconomic and ethnic groups.

This finding is supported by Hernandez (1995), who reported that among families with higher incomes, parents can usually afford to provide resources and educational experiences that foster the development of their children whereas children from poor homes rely more on child care and preschool programs to provide those experiences. Additionally, Mayer (1997) reported that children born into poor families do not have an even start in life. They are more likely to grow up in a mother-only family, live in poorer or under-class neighborhoods, and experience high risks to both their health status and potential school achievement.

Low Socioeconomic Status and School Readiness

Low socioeconomic status (SES) may be linked to a number of undesirable outcomes for children, especially in education. Poverty often has devastating effects on

children's development, including delays in language, reasoning ability, and quality of social interaction with peers and teachers (Sattler, 2001).

Children from low SES backgrounds are at increased risk for school readiness deficits in terms of cognitive and social development (Connell & Prinz, 2002). Brooks-Gunn, Duncan, and Rebello Britto (2000) reported that low family income has the greatest effects on children during early and middle childhood. They added that these effects may be related to low school readiness skills and delayed cognitive and behavioral development.

The absence of basic health care and economic security places many children at-risk for academic failure before they enter school. Children come to school with very different levels of readiness to learn, and the cause of such disparities often is related to the economic and social circumstances of the children's families (Jennings, 2001).

Economic distress may sometimes lead to poor parenting practices. This assumption is supported by reports in the literature suggesting that lower income parents are more likely to issue commands without explanations, less likely to consult the child about his or her wishes, and less likely to reward the child verbally for behaving in desirable ways (McLoyd, 1990). Mcloyd (1990) further noted that emotional and psychological distress may diminish poor parents' sense of support and their involvement in good parenting practices with their children. Lempers, Clark-Lempers, and Simons (1989) supported McLoyd's arguments and suggested that parents who face economic impoverishment may experience increased irritability, hostility, and depression, and may display more inconsistent and punitive behaviors towards their children.

Many studies also have shown that parents' educational level and income may have a substantial effect on children's readiness for school. Britto's (2000) study on family literacy environments and young children's emerging literacy skills found that maternal education showed a significant positive correlation with children's literacy skills at the preschool level. Boak, Griffin, Ripple and Peay (1999) supported Britto's findings by suggesting that children of more educated mothers have higher levels of cognitive and language competencies. Interestingly, Mills (1983) also hypothesized that higher educational attainment of fathers promotes a better quality of parent-child interaction as well as greater variety of stimulating activities, which may affect school readiness.

Parents' Perceptions of Kindergarten Readiness

Perceptions of school readiness focus on the skills that parents and teachers believe children need to have acquired to ensure their success in kindergarten. Diamond, Reagan, and Bandyk (2000) investigated parent's conceptions of kindergarten readiness using data from the second National Household Education Survey (NHES), which was conducted in 1993 by the National Center for Education Statistics (NCES; 1994). The procedure for the study yielded a nationally representative subsample of 2,509 households. Data was collected with computer-assisted telephone interviewing procedures. The School Readiness interview consists of 168 items that include questions about parents' beliefs about their child's school readiness, their child's experience in early childhood programs, and participation in home and community activities.

Sets of items on the scale were grouped under (a) parents' readiness beliefs, (b) the Developmental Profile, and (c) home activities. The researchers found that parents had relatively high expectations for skills that children needed to acquire prior to entering

kindergarten. In addition, parents reported providing a variety of home-learning opportunities for their preschool children. Parent responses on the academic and behavior subscales of the Developmental Profile suggested that children were, on average, capable of performing a variety of skills that have been suggested as important for children entering kindergarten. However, a substantial minority of parents across racial groups indicated that they were concerned about their children's readiness for kindergarten (>10% of Caucasians and almost 25% of other ethnic/racial groups). An analysis of differences in parents' reported concerns found that Caucasian parents were significantly less likely than other parents to report that they were concerned about their children's readiness for school ($X^2 = 25.2$, $df = 2$, $p<.001$), even when education levels were statistically controlled. Additionally, Caucasian parents were more likely than were African American, Hispanic, or parents of other races to suggest that they would delay their child's entry into kindergarten ($X^2=25.5$, $df = 2$, $P< .001$). These researchers concluded that parents have a global view of kindergarten readiness when applied to children in general, but they place the most emphasis on their child's academic abilities. There were no racial or ethnic differences on either the home-learning activities or educational TV viewing scales. On average, parents reported that they provide their child with home-based learning opportunities several times a week. The activities included related to both reading and watching educational television.

Home Learning Environment

The home learning environment focuses primarily upon the exposure the child may have to academic resources and relevant play materials in the home (e.g., children's books, children's educational videos, and toys/games). In addition, the home learning

environment also is related to the amount of time parents or family members spend reading, talking, and supervising educational play or activities with children. A child does not attain school readiness without exposure to situations and careful assistance from others to develop necessary skills and ways of functioning (Carlton & Winsler, 1999). A supportive family and home environment is an important factor for increasing school readiness and overall school success. The home environment includes rules, household chores, exposure to print, supervision, and positive interactions that parents use to enforce and regulate family behavior and functions.

Particular values and attitudes are incorporated into rules at home, which may help children understand and follow rules in school. Finn and Owings (1994) suggested that the values, attitudes, and actions of parents have a major impact on the education of their children. These authors added that when parents' attitudes and values are inconsistent and not clear to the child, it is difficult for him/her to internalize the rules.

Numerous studies have linked high scores obtained on general measures of school readiness skills to learning activities in children's home environments. In addition, many authors have suggested that the home environment has a tremendous influence on the development of young children's literacy and school achievement. For example, Britto and Brooks-Gunn (2001) conducted a study to assess home literacy and low-income African-American preschoolers' literacy skills. Language and verbal interactions, the learning climate, and the social and emotional climate were the three dimensions of the home literacy environment included in the study. In particular, the researchers examined the relative importance of these dimensions for young children's emerging literacy skills.

Britto and Brooks-Gunn's (2000) sample consisted of 126 African-American mothers (ages 14 –20 yrs) whose children were seven months of age or younger at baseline (Time 1). The families in the study were seen three times: at baseline or Time 1 (interview and assessment of maternal reading ability), at a twenty-four-month follow-up or Time 2 (interview and assessment of maternal reading ability), and at a thirty-six-month follow-up or Time 3 (observation of mother child interactions and child assessment). At Time 3, data were collected during a 3 ½ hour home visit conducted by two intensively trained field staff workers. The staff workers administered an extensive series of demographic questions and a set of standard questionnaires to the mothers, evaluated several aspects of the children's development and the home environment, and coordinated several videotaped sessions, including shared book reading and puzzle solving sessions.

Language and verbal interactions were assessed by coding maternal decontextualized and expressive language use from videotaped interactions of the book reading at Time 3. The learning climate in the home was assessed at Time 3 based on coding of maternal quality of assistance from videotaped interactions of mother-child puzzle solving and academic stimulation in the home as rated by observers using the Home Observation for Measurement of the Environment (HOME) Inventory. The Warmth subscale of the Early Childhood HOME Inventory was used at Time 3 to assess the encouragement and warmth in the home environment. Three measures of children's emerging literacy also were assessed:(a) receptive vocabulary, which was assessed using the PPVT-R (on which the child is expected to identify correctly one of four pictures that match a stimulus word), (b) expressive language, which was assessed by the number of

different words spoken by the child during the shared book-reading at Time 3, and (c) school readiness, which was assessed using the Caldwell Preschool Inventory--Revised Version. The items on this measure tap children's knowledge of colors, shapes, and general information.

The researchers completed a regression analysis to examine the associations between dimensions of family literacy environments and young children's literacy skills (Britto & Brooks-Gunn, 2000). Results showed that children's expressive language appeared to be strongly associated with maternal decontextualized and expressive language use during book reading but not with school readiness. Surprisingly, mothers' high school completion was negatively associated with children's expressive language use during shared book reading. However, children of mothers who had a high school diploma scored 10 points higher on the PPVT-R test compared with children whose mothers did not have a high school diploma, which indicates that maternal educational attainment is an important correlate of children's receptive vocabulary skills. Interestingly, maternal decontexualized and expressive language use during book reading was not associated with school readiness. However, maternal high school completion was associated with readiness skills ($\beta = .24$, $p < .01$). Additionally, home-learning environment was significantly associated with children's expressive language and school readiness ($F [8,76] = 8.10$, $p < .0001$.) This one variable explained 42% of the variance in children's school readiness skills ($F [7, 77] = 7.97$, $p < .0001$). Social and emotional climate in the home explained 35% of the variance in preschool children's school readiness skills. In particular, maternal quality of assistance was significantly associated with children's school readiness ($\beta = .27$, $p < .01$). Overall, these results suggest that the home learning

environment is relatively more important for children's school readiness skills than language and verbal interaction or social and emotional climate dimensions, although all of these variables contribute significantly to children's school readiness.

Other researchers have supported Britto& Brooks-Gunn's (1995) findings that the learning environment and parent-child interactions are important predictors of children's school readiness skills. Parker, Boak, Griffin, Ripple, and Peay (1999) examined the degree to which various demographic, parent-child relationship, and home learning environment variables were associated with school readiness using a series of correlation and partial correlation coefficients. They also completed hierarchical regression analyses to examine how changes in the parent-child-relationship and home learning environment from pre-to-post Head Start were associated with improvements in school readiness, controlling for demographic variables. The sample consisted of 173 mothers/maternal caregivers and their children in Head Start. The majority of the children (74%) were 4-year-olds with no previous Head Start experiences. Of the total sample, 99% of the mothers/maternal caregivers were Latino. Their ages ranged from 21 to 62 years of age. The home learning environment was measured by the National Evaluation Information System, Part B, which assessed areas such as the number of educationally relevant play materials in the home and the number of school readiness skills the parent helped the child to learn. The child's school readiness was assessed with the Cooperative Pre-School Inventory (CPI), which focuses mainly on cognitive skills, development, and adaptation to the classroom. The Classroom Behavior Inventory (CBI) was used to measure major dimensions of social and emotional behavior.

Results showed that children whose parents spent more time helping them learn skills at home earned higher numeric competency scores and higher overall cognitive and language competency scores on the CPI. Results also showed that children of more educated mothers had higher CPI total scores at posttest, representing better overall cognitive and language competencies. In addition, parents who had a good understanding of the concept of play showed better outcomes both in terms of cognitive competencies (i.e., the CPI sensory concept score) and classroom behavior outcomes (i.e., task orientation, independence, and creativity) (Parker et. al, 1995).

Contrary to these research findings, Clarke and Kurtz-Costes (1995) reported that literacy activities in the home environment were unrelated to school readiness scores. These researchers examined the relationships between television viewing, educational quality of the home environment, and school readiness. The sample in this study consisted of 30 preschool children (mean age = 4 years 9 months), and their primary caregivers (mean age = 29.7 years). Twenty-eight mothers, one father, and one aunt participated. Twenty-nine of the parents were African American, and one was European American.

Three of six subtests from the Metropolitan Readiness Test (MRT) were used to assess school readiness in this study (Clarke & Kurtz-Costes, 1995). The subtests used were Letter Recognition, Visual Matching, and Quantitative Language. Subtests from the Weschler Preschool and Primary Scale of Intelligence-Revised (WPSSI-R) were used to assess the children's intelligence. According to the authors, the Information and Arithmetic subtests were used because each is strongly correlated with Full Scale IQ. The Questionnaire for Mothers, which was designed for the study, was administered in an

interview format and assessed the education-related beliefs, values, and behaviors of the parents. The quality of the home environment also was assessed using this scale. There were specific items inquiring about the number of children's books in the home, frequency of parent-child joint reading, and parental instruction. In addition, television viewing was assessed with the same questionnaire. The examiners asked parents to estimate their children's viewing time separately for weekdays, Saturdays, and Sundays. These numbers were later combined to yield a single index of viewing time per week. The parent interview and child interview were conducted simultaneously but separately; one investigator conducted each.

The first research question concerned the relationship between TV viewing and school readiness. Correlational analyses with age and IQ covaried revealed that television viewing time was negatively related to school readiness r=(25) = -.329, indicating that children who watched more television had poorer school readiness skills than their peers who watched less television (Clarke & Kurtz-Costes, 1995). Several Pearson product-moment correlations between viewing time and home environmental variables also were calculated. These analyses indicated that children's television viewing time was negatively related to parental instruction, r= (28) = -.351, to the number of children's books in the home, r (28) = -.406, and to the frequency of parent reading to the child, r (28) = -.275. However, none of these relationships were significant. The results also showed that all correlations between home literacy variables and school readiness were nonsignificant (all *rs* < .20). In addition, the number of hours parents worked outside the home was unrelated to children's television viewing time and school readiness. Results of these analyses suggested that for this sample of disadvantaged preschoolers, literacy

activities in the home were not significantly related to readiness scores. The authors suggested that one limitation of the study, which may account for these findings, was the reliance on self-reports rather than using direct observation to assess both television viewing and home environment variables. Nonetheless, age and television viewing were both significant predictors of school readiness skills.

In support of promoting early academic skills at home Halle, Kurtz-Costes, and Joseph (1997) concluded that it is important for parents to understand that the maintenance of positive attitudes about academic abilities and skills may be one of the most important family characteristics associated with future success. They further stated that parents who make it their priority to purchase books for their children are sending an important message about their commitment to and value of literacy within their homes.

Differences in Beliefs and Acculturation Levels Among Ethnic Groups

Parents are their children's first teachers. Edwards (1990) reported that parents of minority groups (African Americans, Hispanics, Asians, Native Americans, and Pacific Islanders) are deeply concerned with getting an effective and relevant education for their children and would like the educational system to reflect their values and way of life. She added that parents of these ethnic groups have not been positively viewed by public schools, which may have created barriers for successful school involvement or academic support of children.

Acculturation is the process by which members of one cultural group adopt the beliefs and behaviors of another group. Although acculturation is usually in the direction of a minority group adopting habits and language patterns of the dominant group, acculturation can be reciprocal, that is, the dominant group also adopts patterns typical of

the minority group. Assimilation of one cultural group into another may be evidenced by changes in language preference, adoption of common attitudes and values, membership in common social groups and institutions, and loss of separate political or ethnic identification (Roosa, Dumka, Gonzales, and Knight, 2002).

An ethnic group may be defined as those who perceive themselves as alike by virtue of their common ancestry, real or fictitious, and who are so regarded by others (Shibutani & Kwan, 1993) Ethnic identification may be based on race, culture, or national origin (Seligman & Benjamin-Darling, 1989). Reports from the Census Bureau (2000) indicated that the population of the United States is composed of five primary ethnic groups: African Americans, Asians, Pacific Islanders, Hispanics, Native Americans, and Whites. These groups may also be regarded as sub-cultures within North American culture. African Americans, Hispanics, Asian Americans, and Native Americans are all generally regarded as minority groups in North American society and may identify with different cultural values and beliefs from the mainstream culture. However, due to sustained contact between two or more distinct cultures, some minority individuals adopt the values, beliefs and behaviors of the dominant culture, which is mainly referred to as acculturation. Different people from different ethnic groups may vary in acculturation levels. Acculturation refers to the process of learning about and adapting to the host culture, potentially leading to the gradual incorporation of beliefs, values, behaviors, and language of the dominant group and a sense of belonging or identification with that group (Rogler, Cortes, & Malgady, 1991). Although acculturation is most commonly applied to groups who have come to the United States within the past two or three generations, this process is also important to understanding groups that have

been isolated or excluded from mainstream culture (e.g., families in extreme poverty; African Americans, particularly males; Native Americans, particularly those on reservations)(Roosa, Dumka, Gonzales, & Kight, 2002).

Culture is a term that describes how groups of people perceive the world, formulate beliefs, evaluate ideas and experiences, and behave (Biehler & Snowman, 1997). One of the common functions of culture is to provide a more specific means of self-orientation for the human being (Wilson, 1990). Carlton and Winsler (1999) noted that culture refers to the development of higher-order human psychological abilities that form as a result of the child's history of interacting and participating with others in cultural activities.

Research has identified numerous links between different cultural groups and school performance. The reasons underlying some of these differences may be in the life experiences between groups. Acker and Wheby (2000) noted that student achievement is a product not only of a student's cognitive abilities but also of family values and practices. The environments in which children of different cultural and socioeconomic groups live may not encourage the same beliefs and attitudes or emphasize the same skills (Bowman, 1994). This notion is supported by Okagaki and Steinberg (1993), who questioned parents about characteristics important to their idea of intelligent first graders. They found that Anglo American parents valued cognitive traits over non-cognitive ones, while ethnic minorities (Cambodian, Filipino, Vietnamese, and Mexican immigrants) saw non-cognitive attributes such as motivation, self-management, and social skills as equally or more important than cognitive skills. In addition to these findings, Spencer (1990)

reported that African American parents found self-discipline to be the most important characteristic for young children in the classroom.

Differences in school performance may exist because children are taught to view the world, interpersonal relationships, standards of behavior, and goals and objectives of education differently (Bowman, 1994). Researchers have concluded that cultural expectations or priorities may determine the influential behaviors, attitudes, and beliefs that children develop. This notion was supported by Spencer (1990), who stated that children develop specific values and beliefs based on the transmission of cultural values from parents to children. Bowman (1994) added that cultural patterns of interaction guide the developing child but they also become the basis for their definitions of themselves and their identity. Ellis and Gauvin (1992) stated that cultural expectations determine how children and adults are expected to behave, how individuals are to behave in same-age versus mixed–aged company, and how youngsters and elders are to regard one another. Therefore, children learn to establish and verify perceptions and beliefs about the world through direct teaching by older people in their community and through identification with those people who care for them and are emotionally important to them (Bowman, 1994).

In support of this notion, Ogbu (1997) stated that Black parents do not believe that the United States is a land of equal opportunity. After interviewing 73 African American parents, Ogbu concluded that some parents teach their children ambivalent attitudes. Parents espouse the need to work hard in school and obtain a better education than they did. On the other hand, they verbally teach their children about their own life experiences related to discrimination, unemployment, and underemployment. Through

these experiences, children may develop the notion that if even they succeed in school, they may not be successful as adults in the wider society. This belief may develop based on what children have seen happen to their parents or family members.

The experiences of different ethnic/cultural groups suggest that given different experiences, values, beliefs and emphases, people interpret their worlds differently. In support of Ogbu's conclusions, McGillicuddy-De Lisi (1990) stated that beliefs are viewed as general cognitive constructs that parents hold to be true. Thus, attributions, values, and attitudes stem from these beliefs and impact children's behavior and responses in particular situations.

In the case of differences between ethnic/cultural groups and educational values/beliefs, several studies have found associations between the educational beliefs of parents of different ethnic groups and their children's academic competencies. Flannagan (1997), for example, examined the associations between the school-related beliefs of Mexican-American and Anglo-American mothers and children. The purpose of the study was to explore the potential contributions that mother-child discourse about school might make to the relationship between mothers and children's attitudes about school related competence. The sample consisted of 40 mother-child dyads. The dyads were recruited through the preschools the children attended. Nineteen of the dyads consisted of mothers and daughters. Eight of the mother-daughter dyads and 9 of the mother-son dyads were Mexican-American, and the remainder were Anglo-American. All mothers had been educated in the United States and were fluent in English. The mothers' mean educational level was 13.57 (SD = 2.15) years. Educational level did not differ significantly between ethnic groups.

Participating mothers in Flannagan's (1997) study were asked to engage their children in a conversation about a typical day at school on four occasions and to record the conversations on audiotape. At each of the four times that conversational data were obtained, each mother was given written instructions pertaining to the date, approximate time in which to hold the conversation, and brief directives on how conversations should flow (e.g., try to get a complete and accurate report of your child's day at school; or try to keep the conversation as natural as possible). Each audiotape was delivered to and acquired from the mothers and was transcribed and coded by trained research assistants.

Flannagan (1997) found that mothers' beliefs about their own academic competence were linked to mother-child discourse about school-related topics and to children's beliefs about their school-related competence. Findings showed direct associations between Anglo-American mothers' beliefs about their own academic competence and that of their children ($r = .77$, $p < .01$). Correlations between Mexican-American mothers' beliefs about their own academic competence and their children's academic or behavioral competence were lower than those of the Anglo-American mother-child dyads ($r = .31$, $p < .01$). These findings may be due to the fact that, particularly in discussing learning-related topics, the direction of influences appeared to be primarily from mother to child in Anglo–American dyads (mothers lead conversations related to school activities by asking their children about academic tasks they completed in school that day) but primarily from child to mother in Mexican-American dyads (the children lead conversations by telling the mother about what academic tasks or learning activities they were involved in at school). Flannagan (1997) concluded that mothers who feel positive about their own academic abilities transmit those positive school-related

attitudes to their children in a variety of ways, including parent-child discourse, and the result may be that children feel relatively more competent themselves. Encouraging parents to listen to and seriously consider their children's input in parent-child conversations about school could be both educational to parents and beneficial to children.

Other researchers conducted a study with minority families and found results contrary to those of Flannagan (1997). Halle, Kurtz-Costes, and Mahoney (1997) examined family influences on school achievement in low-income African American children. Two specific goals of the study were to determine the strength of the association between parental beliefs about achievement and parents' achievement-fostering behaviors. The sample consisted of 41 children (22 girls and 19 boys) and their primary caregivers who were interviewed in their homes during the summer of 1994.

The sample in Halle et al.'s (1997) study was drawn from all third and fourth graders enrolled at a target elementary school. Parents responded to a structured interview that assessed parental beliefs and behaviors regarding academic achievement. Halle et al. (1997) found few significant associations between their measure of parental behaviors and child achievement. However, correlations between the parental beliefs measures and children achievement in math ($r = .50$, $p < .01$) and reading ($r = .42$, $p < .01$) were positive and significant. The relationships between parents' beliefs and children's achievement were stronger and more consistent than relationships between parental behaviors and children's achievement in math ($r = .11$, $p < .10$) and reading ($r = .17$, $p < .10$). These researchers concluded that parental beliefs that are linked to actual achievement-promoting behaviors are important in helping children achieve academic

success. In addition, they suggested that the key to resiliency among African American youth from disadvantaged backgrounds may lie in the ability of parents to combine their high expectations for their children's academic success with actions that promote that success.

Findings from the literature presented in this section suggest that different life and situational experiences across ethnic groups have a direct impact on children's educational/school performance. These findings are supported by Diamond, Reagan, and Bandyk (2000), who suggested that differences n parents' decisions related to kindergarten entry may reflect racial and cultural differences in conceptions of schooling. Therefore, it is important that interventions are designed at the parent and child levels to promote skills and behaviors to prepare children to be successful in school. It is particularly important that interventions are empirically supported and ethnically appropriate to obtain positive outcomes across all ethnic groups.

Summary

This literature review has investigated a number of studies pertaining to the outcomes of children on school readiness measures. School readiness measures are brief assessment procedures intended to identify children who may need further evaluation in order to determine if they are at risk for school failure. This notion is supported by Pianta (1990), who suggested that school readiness measures should mainly be used to identify individuals who are likely to show problem outcomes and to whom preventive intervention can be offered to enable educators to create appropriate services for the needs of the child. If these measures are used to develop individualized interventions,

educators must be considerate of factors that may limit children's abilities to perform well on these measures.

Factors that have been found to correlate highest with school readiness scores include (a) the home learning environment of the child, (b) parents' educational attainment, and (c) socioeconomic status. However, ethnic/cultural influences and parental beliefs and behaviors also are considered to be strong predictors of school readiness and school performance outcomes in children. It is suggested that educators must be more considerate of the effects these factors may have on the student's performance or skills across domains before planning individualized interventions for the child.

Overview of the Current Study

The present study examine how low income family differences (i.e., children's early development, parents' perceptions of a child's readiness for school, parents' feeling about the child's school or teacher, parents' own educational experiences) are related to children's composite scores on the Early Screening Inventory –Kindergarten (ESI-K) Additionally, correlations between parents' and children's demographic characteristics on the ESI-K and the four parent measures be examined. Findings from this study may hold important implications for children from low SES backgrounds. A number of studies have documented social class and income differences in children's exposure to the particular literacy experiences shown to be important for the development of readiness and early academic skills. This study concentrates on parents' differences and determines how much parental attitudes, experiences, and perceptions predict children's readiness scores.

Chapter Three

Method

Introduction

The current study was designed to examine the relationships between low income kindergarten children's scores on the Early Screening Inventory – Kindergarten (ESI-K), the child's developmental history, their parents' perceptions of their readiness for kindergarten, their parents' own educational experiences, and their parents' attitudes towards their child's school. Additionally, questions related to ethnicity, acculturation, and parents' educational levels also were included to determine the relationship between these demographic variables and children's kindergarten readiness scores.

Participants

Parents of students from 10 kindergarten classrooms in a large central Florida school district were contacted for participation in the study. A total of 63 parents and their children participated in the study. In order to qualify for the study, the child had to be in kindergarten for the first time during the 2003-2004 academic year and identified as receiving free or reduced price lunch at school. Students were selected from Broward and Oak Park Elementary Schools in Tampa, Florida and J.S. Robinson Elementary School in Plant City, Florida. These three schools were selected to obtain a valid representation of students across ethnic/cultural groups. The demographics of the participating schools are shown in Table 1.

Table 1

Demographics of Participating Schools

Ethnicity	Broward Elementary	Oak Park Elementary	J.S. Robinson Elementary	Mean %
African- American	25%	67%	5%	32.33%
Caucasian	21%	17%	49%	29%
Hispanic	43%	12%	44%	33%
Other	10%	3%	2%	5%
Male	50%	48%	44%	47.3%
Female	50%	52%	56%	52.7%

Children in this study ranged in age from 5 to 6 years. Sixty-seven percent of the students were female (*n*=42) and 33% were male (*n*= 21). There was no notable difference between the children by ethnicity Caucasian (*n*= 20), African Americans (n= 19), Hispanic (*n*= 20) Multicultural (*n*= 3), and Native American (n= 1). The majority of parents in the study were born in the U.S. (*n*= 47), and a normal distribution was observed among parents' educational attainment. Demographics for the entire sample are shown in Table 2.

Table 2

Parent and child demographics for total sample

Child Variables		*N* = 63	Percentage
Gender			
	Male	21	33%
	Female	42	67%
Ethnicity			
	Caucasian	20	33%
	African-American	19	30%
	Hispanic	20	33%
	Asian	<1	-
	Multicultural	3	4%
	Native American/Indian	1	-

Age			
	5	7	11%
	6	56	89%
Place of Birth			
	Born in U.S.	47	75%
	Not born in U.S.	16	25%
Ethnicity			
	Caucasian	24	38%
	African-American	23	37%
	Hispanic	15	25%
	Asian	1	-
	Multicultural	0	-
	Native American/Indian	0	-
Level of Education			
	< High School	9	14%
	High School Grad	22	35%
	Some College	20	32%
	Bachelors Degree	10	16%
	Postgraduate Degree	2	3%

Demographic Survey. Upon giving consent for their participation, the parents completed a brief demographic survey providing the data shown in Table 2. This survey included questions about the parents' ethnicity, the child's ethnicity, and the parents' educational attainment. The survey also included questions about what is the dominant language spoken in the home, and the parents' length of time residing in the U.S. The survey was developed by the researcher specifically for this study based on demographic questions developed by Raffaele Mendez (2003) for a study of children with special needs. Additionally, the question about primary language was based on a question from the Hispanic Health and Nutrition Examination Survey (HHNES), 1982 – 1984. Appendix B contains a copy of the survey.

Measures

Early development/medical history.

The child's early development and medical history was assessed with 7 questions adopted from the Early Screening Inventory – Revised (ESI-R), Parent Questionnaire (PQ) (Meisels, Marsden, Stone Wiske, and Henderson, 1997). The original questionnaire consists of 43 items. Questions were answered as "yes" or "no" (e.g., has your child ever had trouble seeing, does your child use crayons or markers to scribble, can your child feed him/herself using a spoon or fork)? Reliability for the PQ scale was assessed by Henderson and Meisels (1994). One Thousand two hundred and ninety six students between the ages of 4.5 and 5.11 were selected from a national restandardization of the Early Screening Inventory (ESI; Meisels et al., 1992; as cited in Henderson & Meisels, 1995). The students were administered the Early Screening Inventory and the McCarthy Scales of Children's Abilities. Their parents were asked to complete the Parent

Questionnaire within 90 days of the ESI screening. Reliability for the PQ was within an acceptable range of (.56 - .83) and varied by age groups, with a slight tendency to decrease in the youngest and oldest age groups. Cronbach's alpha for the PQ was reported as (.72) for the entire sample.

The 7 questions that were adopted specifically for this study relate to the child's medical history, and developmental history. These questions determine whether the child may have experienced any conditions, problems, or events that constitute risk factors for normal development.

Perceptions of readiness for kindergarten.

Parents' perception of their child's readiness for kindergarten was assessed with a measure adapted from the 1993 National Household Education Survey Questionnaire: School Readiness Screener. On the original measure, parents were asked how important they thought it was for any child to know or do certain things to be ready for kindergarten. The original measure included seven items (e.g., How important do you think that it is that a child … can count to 20 or more, takes turns and shares, etc.). For this study, this phrasing of the question posed to parents was changed to, "When your child started kindergarten in August 2003, how ready did you think he or she was for kindergarten in each of the following areas?" Thus, instead of assessing parents' perceptions of what any child should know, parents were asked to what degree they perceived that their child was ready for kindergarten in each of 12 areas. Eight of the questions were from the National Household Education Survey (e.g., counting, taking turns and sharing, enthusiasm for new activities, knowing the letters of the alphabet, knowing how to use a pencil, sitting still and paying attention, speaking clearly). Five

others were added (i.e., getting along with other children, following directions, being away from parents during the day, handling frustration appropriately, and keeping track of own belongings) based on a review of the literature on kindergarten readiness. These questions were presented to parents as Section III (Educational Experiences Inventory) on the parent questionnaire. The Educational Experiences Inventory was developed by Raffaele-Mendez (2000) to assess parents' perceptions of their own schooling experiences. On the original measure, parents were asked to report how much they identified with each of 21 statements (i.e., 1 = Disagree Strongly, 2= Disagree, 3 = Neutral, 4 = Agree, and 5 = Agree Strongly). For this study, eight (8) of the original 21 items were selected for inclusion. Possible scores for the abbreviated measure used in this study ranged from 8 to 40, with higher scores indicating more positive educational experiences. Mean scores ranged from 1 to 5.

To determine content validity, a panel of six experts reviewed the Educational Experiences Inventory. The panel was comprised of the school psychologist, the principal, and a secretary at a Hillsborough County charter school serving homeless children, as well as a retired Educational Psychology professor, an associate professor from the Measurement Department at USF, and a school psychology graduate student. Each member was given the measure, told its purpose, and asked to evaluate whether he or she believed the measure was consistent with its purpose. These experts concluded that all of the items appeared to be measuring parents' perceptions of their own educational experiences.

Cronbach's alpha is a measure of internal consistency reliability that shows the extent to which items correlate with one another and the test total score (Hatcher &

Stepanki, 1999). Cronbach's alpha for the Educational Experiences Inventory was established at .94 for the original 21-item measure (Terry, 2003). Therefore, the original inventory is considered to be a reliable measure of parents' educational experiences. Cronbach's alpha was calculated for the 8-item measure as part of the current study. The Educational Experiences Inventory was presented to parents as Section IV of the Questionnaire.

Pa*rents' attitudes toward school/teachers.* Parents' attitudes towards school/teachers were assessed with a measure adapted from the School Attitude Assessment Survey–R (McCoach, 2000). On the original measure, students reported their interest in and affect toward school, their teachers, and courses. Students' academic self-perception, motivation/self-regulation, and goal valuation also were reported. The original survey included 43 items (e.g., This school brings out the best in me, I want to get good grades in school, etc.) For this study, the 9 items that were adopted from the SAAS-R were selected because they were the only items that specifically relate to attitudes towards school and teachers. The phrasing of the question posed to parents was changed to measure parents' satisfaction with their child's teacher and school. Thus, instead of assessing students' attitudes towards their schools, teachers, and courses, parents were asked to rate their attitudes towards their child's school and teacher.

Reliability coefficients for the five subscales of the SAAS-R were provided by McCoach and Siegle (2001). The SAAS-R was distributed to one hundred and seventy-eight gifted high school students from grades 9 to 12 from 28 districts across the nation. After the students completed the SAAS-R, a district contact person reported the results to

the researcher. Cronbach's alpha for Attitudes Towards School was reported as (.89) and Attitudes Towards Teachers was reported as (.95).

Early Screening Inventory – Kindergarten (ESI-K). The dependent measure in this study was the scores from the 2003–2004 Early Screening Inventory–Kindergarten (ESI-K). The ESI-K is a performance-based measure used to determine the readiness of students entering first grade. Throughout the year, teachers assess kindergarten students on a variety of assessment activities in the areas of Visual-Motor/Adaptive, Language and Cognition, and Gross Motor development. Items in the Visual-Motor/Adaptive section require children to copy shapes, draw a person, and remember picture cards in sequential order. In the Language and Cognition section, students are required to count blocks and use verbal reasoning, verbal expressions, and auditory sequential memory. In the Gross Motor section, students are required to jump, walk on a line, balance on one foot, hop, and skip. At the beginning of the school year, teachers rated each student on all activities according to state standards. On individual student protocols, scores from all domains are calculated, and students receive one of three overall readiness ratings: <9= Not Ready, 10-13= Getting Ready, and >21=Ready.

The total sample used in the standardization of the ESI-K consisted of 5,034 children. The racial/ethnic representation was approximately 70%White (non-Hispanic) children and 30 % non-white children. Males and females were equally represented. Approximately 80% of parents in the standardization sample had completed high school or more. The median for inter-observer reliability for the ESI-K has been established at .90 percent accuracy. The predictive validity of the ESI-K was assessed on a subsample of 251 children who were administered the McCarthy Scale of Children's Abilities

(MSCA) seven months after the administration of the ESI-K. A correlation coefficient of .73 ($p<.001$) was obtained by comparing the ESI-K total score with the GCI. Sensitivity of the ESI-K was reported as .93 and the specificity was .80. This means that more than 9 out of 10 children, or 93 percent of those who were at-risk, were correctly identified. Conversely, 4 out of 5 children who were not at risk were correctly identified. This establishes a very high validity for the ESI-K (Meisels, Marsden, Wiske, & Henderson, 1997).

Procedure

Prior to beginning data collection, the researcher contacted the School District of Hillsborough County and secured permission to conduct the study. Approval was also secured from the University of South Florida's Institutional Review Board (IRB). Subsequently, the principals and kindergarten teachers from Oak Park, J.S. Robinson, and Broward elementary schools were contacted in person to explain the study and to gain the necessary support. After receiving approval from the principals at each school, the researcher consulted the data processing clerks and requested that mailing labels with addresses printed for children identified as receiving free and reduced lunch, not receiving Exceptional Student Education Services (ESE), and who were enrolled in kindergarten the prior year. This helped the researcher to identify the students who were from low socioeconomic status (SES) homes and which parent and their children were eligible to participate in the study. The researcher used the labels to mail packets to the parents of the children found eligible to participate in the study. The mailing envelopes were stuffed by the researcher and delivered to each school. The data processing clerks assisted the researcher with labeling the envelopes, and the researcher delivered the

envelopes to the post office for mailing. The envelopes contained an overview of the study, requirements for participation, consent forms, demographic survey, parent questionnaire, and a pre-addressed and stamped envelope for return of completed documents. The researcher also had the demographic survey and the parent questionnaire translated into Spanish by a teacher and translator at J.S. Robinson Elementary School in Plant City, Florida. All of the surveys used in the study had English printed on the front side and the Spanish translation on the reverse side. A code number was written on the questionnaire, the consent forms, and the return envelopes. The incentive for the study included a pair of Buccaneer Tickets. It was explained that the incentive would be placed in a drawing and a parent and child pair will win the tickets. The names were included in the drawing for the return of a signed consent form whether or not permission is given for the student to participate in the study.

Affirmed consent from the parents was required, meaning that the parents had to sign the form to indicate their permission for their participation and allow the researcher to access their children's school records. Parents were informed that they could discontinue their participation at any time.

When consent forms and completed questionnaires were returned to the researcher indicating that parents' were interested in participating in the study, the researcher obtained a list with children's names for whom parents had provided consent to obtain their children's ESI-K for fall 2003 results. With assistance from the data processing clerks, the researcher created a master list with the student's ESI-K results. Upon receipt of the consent form, the code on the demographic forms was highlighted and the student's name was signed okay on the ESI-K results list as evidence that his/her

form had been returned and that he/she had been given consent to participate in the study. The child's name from the consent forms and the master list was matched up and the code numbers from the consent form was written beside student's name on the ESI-K result report for the researcher to easily identify and keep the parents' questionnaires and children's ESI-K results consistent.

A total of 177 letters were mailed to the parents, with 63 letters returned indicating consent for participation, an overall return rate of 36%. The percentage of respondents by children's ethnicity was African American children 30%, Caucasian children 33%, Hispanic children 29%, Multicultural children 6%, and Other 2%. The return rate by schools is listed below in Table 3

Table 3

Percentage of Respondents by school

School	*Number*	*Percentage*
Broward Elementary	14	22%
Oak Park	17	27%
Robinson	32	51%

Data Analysis

Data were entered into a computer file, with responses coded according to their order on the questionnaire (i.e., 1 = Not At All, 2 = A Little, 3 = A lot). Positive items reflected high scores. The computer program SPSS was used to analyze the data

Descriptive statistics were used to describe the basic features of the data in a study. They provided simple summaries about the sample and the measures. They are also used to present quantitative descriptions in a manageable form.

This study analyzed the data in three ways. The first was an analysis of descriptive statistics to report the means, standard deviations, and frequency distribution of the ESI-K scores and four of the parent measures in the study (parents' perceptions of kindergarten readiness, parents' attitudes towards school, parents' educational experiences, and the child's developmental history.

The second analysis performed was a simple correlation matrix. A correlation matrix is an arrangement of correlation coefficients in rows and columns that illustrates how each variable correlates with all variables in the set (Gall et al., 1996). The correlation matrix included the following variables: 1) child's ESI-K score, 2) the total score on Child's Early Development subscale, 3) total score on the Educational Experiences Inventory, 4) total score on the Parental Perceptions of Kindergarten Readiness, and 5) total score from Parents' Attitudes Towards School scale. Parent demographic variables also were included in the correlation matrix. This analysis allowed for the examination of the relationships among all of these variables.

Subsequently, multiple regression, analyses one of the most widely used statistical techniques in educational research (Gall et al., 1996), was used to determine the magnitude of the relationship between the criterion variable (ESI-K scores) and the predictor variables (i.e., 3-5 above and the parents' educational attainment. A hierarchal regression was used to provide estimates both of the magnitude and statistical significance of relationships between the independent variables and the dependent variable. This allowed the examiner to determine whether any one of the predictor variables helped predict kindergarten readiness scores on the ESI-K over and above what could be predicted by the others.

Chapter Four

Results

This chapter provides a description of the results of statistical analyses used to address the three research questions. First, a power analysis and the internal consistency of measures are reported. This is followed by a summary of descriptive statistics that addresses the first research question regarding the percentage of low-income children scores within the Ready, Getting Ready, and Not Ready categories on the ESI-K. The second research question is addressed through a correlation matrix that shows the relationship between each of the independent variables and scores on the ESI-K. Finally, the results of a hierarchal regression analysis are presented to address question 3 regarding the degree to which the child and parent variables in this study (i.e., child's ethnicity, parents' educational attainment, parents' length of time in the US, parents ethnicity, child's early development, parents' perceptions of school readiness, parents' educational experiences, and parents' attitude towards school) predict children's readiness scores on the ESI-K.

Preliminary Analyses

Power analysis. A power analysis was computed to determine the number of participants required for statistical power in the study. Results of the power analysis indicate that the sample size required for statistical power of .05 is 60. The sample size for the current study is 63, indicating that the power is considered adequate for the study.

Internal consistency of the measures. To gain a measure of internal consistency for each instrument, Cronbach's alpha was calculated for the Early Development Scale, the Parents' Perceptions of School Readiness Scale, the Parents' Educational Experiences Scale, and the Parents' Attitudes Towards School Scale. Relatively strong internal consistency exists within the Early Development Scale (.87), the Parents' Perceptions of School Readiness Scale (.89), and the Parent's Educational Experience Scale (.92). All of these values represent acceptable internal consistency. Nunnally (1978) suggested that a reliability coefficient should be .70 or above. For the Parents' Attitudes Towards School Scale, the alpha was .62, which is considerably lower than the others, and is slightly lower than what is typically considered acceptable. See Table 4 for a summary of Cronbach's alpha coefficients.

Table 4

Cronbach's Alpha for the Parent Measures

Parent Measure	Cronbach's Alpha
Child's Early Development	.87
Parents' Perceptions of School Readiness	.89
Parents' Educational Experiences	.92
Parents' Attitudes Towards Schools	.62

Descriptive Statistics

To address research question one, "What percentage of low-income children score within the Ready, Getting Ready, and Not Ready categories on the ESI-K?," a descriptive analysis was conducted using the obtained scores on the ESI-K for all

participants. Table 5 shows the percentages of children in each classification by the parent and child variables. A chi-square analysis also was computed to establish significant differences between the frequencies of the variables in the study. The chi-square values for each variable and its respective significance levels are shown in Table 5

Table 5

Percentages of Children in each ESI-K Category by Parent and Child Variables

N = 63		*Ready*	*Getting Ready*	*Not Ready*	χ^2 *Value* (df)
Total Sample		64%	14%	22%	79.34 (38)**
Gender					2.64(2) *
	Males (*n*=21)	52%	24%	24%	
	Females (*n* = 42)	69%	10%	21%	
Birth History					5.01 (2)
	Difficulties (*n*=17)	41%	24%	35%	
	Normal (*n*= 46)	72%	11%	17%	
Parent Place of Birth					8.05 (10)
	USA (*n* = 47)	64%	15%	21%	
	Other (*n* = 16)	63%	13%	25%	
Child's Ethnicity					4.62 (8)
	Black (*n*=19)	47%	26%	26%	
	White (*n*= 20)	75%	5%	20%	
	Hispanic (*n*=20)	65%	10%	25%	
	Multicultural (*n*=3)	67%	33%		
	Native Am./Ind.(*n*=1)	100%			
	Asian (*n*= 0)				
	Other (*n*= 0)				
Parent Education Level					12.5 (8)
	< High School (*n*= 9)	22%	22%	56%	
	High School Grad(*n*=22)	59%	18%	23%	
	Some College (*n*= 20)	70%	15%	15%	
	Bachelors Degree(*n*= 10)	90%		10%	
	Graduate Degree (*n*=2)	100%			

Note: ** . Chi square is significant at the .01 level (2- tailed)
* .Chi square is significant at the .05 level (2-tailed)

Most of the children in the study were classified as Ready on the ESI-K (64%). Several interesting findings can be seen in this table. First, significant differences were found between children's ESI-K classifications based on gender with a greater percentage of girls (69%) scoring in the Ready category compared to boys (52%). Second, the majority of children who scored in the Ready category did not experience any birth difficulties (72%). In contrast, among children who had birth difficulties, there were a larger percentage in the Getting Ready and Not Ready categories combined (i.e., 59%) than in the Ready category (41%). Parents' place of birth (i.e., in the U.S., outside of the U.S.) did not seem to be related to differences in kindergarten readiness. When the child's ethnicity was taken into consideration, there were no appreciable differences found between children identified as Ready and Not Ready. However, differences were found between children of different ethnicities in the Getting Ready category, with more Black children (36%) than White (5%) or Hispanic (10%) in this classification category. When considering parents' educational attainment, significant differences were found between children's ESI-K classifications in all categories. In general, the more education the parents had, the more likely a child was to be in the Ready category.

Table 6 includes the means, standard deviations, medians, and possible scores that could be obtained on the ESI-K and the range of scores obtained by the sample.

Table 6

Measures of Central Tendency for Children's ESI-K Classifications

Child Variables (N = 63)	Mean	SD	Median	Category Cutoffs	Range of Sample Observed
ESI-K Scores for the Total Sample	21	5	23		
Ready (*n*= 40)	24	3	24	21 – 28	21 -28
Getting Ready (*n*= 9)	18	2	18	16 – 20	16 – 20
Not Ready (*n*= 14)	12	5	13	0 – 15	4 -15

Note: Possible scores on the ESI-K range from 0 to 28. Classifications depend on the child's age at the time the ESI-K was administered.

As can be seen in Table 6, the mean score on the ESI-K in this sample was 21 with a standard deviation of 6.

Table 7 includes the descriptive statistics for all of the parent measures by the parent variables. For each measure, higher scores indicate more positive outcomes except for the Early Development Scale, where lower scores indicated lower birth risk, and higher scores indicated higher birth risk. For the Early Development Scale, the standard deviation was added to the mean to provide a cut-off score related to normal and at-risk birth factors. Scores at or below 10 are considered to represent normal early development and scores above 10 are considered to represent at-risk or problematic early development.

Table 7

Descriptive Statistics of the Four Parent Measures

Parent Variables ($N = 63$)	Mean	SD	Median	Range of Possible Scores
Early Development*	10	3	6	8 - 25
Perceptions of Readiness**	29.9	4.99	31.0	12 - 36
Educational Experience***	21.0	4.0	24.0	8 - 24
Attitude Towards Schools**	25.6	1.66	26.0	9 - 27

Note: *Higher scores indicate greater risk.

**Higher scores indicate greater perceptions of readiness.

***Higher scores indicate more positive perceptions of educational experiences.

****Higher scores indicate more positive attitudes towards schools.

Correlation Results

Research question two, inquired about the relationship between low-income children's overall ESI-K score and the other variables in the study, and a correlation matrix with these specific variables was generated. (Note: A correlation matrix for all variables in the study can be found in Appendix A.) Table 8 shows the specific correlations for children's ESI-K readiness scores, parent variables, and child variables. The table shows the Pearson *r* correlation values and level of significance for each set of variables considered.

Table 8

Correlations between child and parent variables and ESI-K readiness scores

Measures		ESI-K readiness Scores
Child Measures	Developmental History	-.29*
	Age	.10
	Gender	.6
	Ethnicity	.4
Parent Measures	Perceptions of Readiness	.46**
	Educational Attainment	.46**
	Attitudes Towards Schools	.42**
	Educational Experiences	.21

Note: ** .Correlation is significant at the .01 level (2- tailed)
* .Correlation is significant at the .05 level (2-tailed)

Moderate correlations were observed between ESI-K scores and parents' perceptions of readiness, parents' educational attainment, and parents' attitudes towards school except for parents' educational experience where a low moderate correlation was observed. Low correlations were observed between ESI-K scores and three of the child measures, age, gender and ethnicity. A low negative correlation was observed between ESI-K scores and children's early development.

Hierarchal Regression.

A four-step hierarchal regression analysis was calculated to determine the extent to which each of the predictor (i.e., independent) variables in the study (i.e., parents' educational attainment, child's early development, parents' perceptions of school

readiness, parents' educational experiences, and parents' attitudes towards schools), predicted children's ESI-K readiness scores/classifications. These analyses were computed to address research question three, "Which variables or combination of variables best predicts low-income children's scores on the ESI-K"?

It is noted that prior to conducting the regression analysis, the categorical variables that had multiple categories (i.e., child's ethnicity) were changed to be dichotomous. Child's ethnicity was re-coded as either majority (i.e., White) or minority (i.e., any other race).

Variables were entered into the regression equation based on the size of the correlation between the predictor variables and the ESI-K. Those variables with the highest correlations were entered into the model first. In step 1, the parents' perceptions of kindergarten readiness was entered into the model. This variable explained 18 percent of the variance in predicting children's readiness scores on the ESI-K (R^2 change = 18, p = .001). In step 2, the parents' educational attainment variable was entered along with the first variable. These variables together explained 33 percent of the variance when predicting children's readiness scores on the ESI-K. The change in prediction when the second variable was added was found to be significant (R^2 change = 12, p = .001). Parents' attitude towards school was added to the model in step 3, and this variable along with the first two independent variables in the model accounted for 41 percent of the variance for ESI-K scores. Despite the increase in variance accounted for by the model when adding in parents' attitude toward school, no statistically significant change was found (R^2 change = .08).

In Step 4, parents' educational experience was added to the model. This variable did not increase the amount of variance accounted for by the model. The variance remained at 41%, indicating that there was no change in the variance. (R^2 change = .00).

The results of the hierarchical regression analysis are shown in Table 9 below. The first column of the table lists the children and parent variables as well as subscales from the parent measures. The variables are listed individually in the order in which each was entered into the model. The subsequent columns report the beta weights (partial correlation coefficients of a single predictor in the regression model), R**2** (the percent of the dependent explained by the independent), the change in R**2** (the amount of change between the predictor variables when they are combined in the regression model), and the significance levels.

Table 9

Regression Model Predicting ESI-K Scores from Five Parent Variables

		All	
Variables	*β*	*R^2*	*R^2change*
1. Parents' Perceptions of K. Readiness	.45	.20	.20***
2. Parents' Perceptions of K. Readiness Parents' Education	.37 .36	.33	.12***
3. Parents' Perceptions of K. Readiness Parents' Education Parents' Attitudes Towards School	.33 .29 .30	.41	.08
4. Parents' Perceptions of K. Readiness Parents' Education Parents' Attitudes Towards School Developmental History	.39 .30 .30 -.06	.41	.00

*Note: β = Beta at final step, * P, .05. ** P, .01. *** P, 001. N = 63 representing the number of participants with ESI-K data whose parents completed the Parent Questionnaire.*

Overall, results from the hierarchical regression showed that parents' perceptions of readiness and parents' attitudes towards school accounted for a significant amount of the variance when predicting children's readiness scores on the ESI-K. Standardized beta weights of all the variables at the final step of the regression were as follows: parents' perceptions of school readiness (β = .39), parents' education (β = .30), parents' towards schools (β =.30), and the child's developmental history (β = -.06) This indicates that parents who thought that their children were ready for school, had higher education levels themselves, had positive attitudes towards schools, and recalled their own educational experiences positively had children who performed better on the ESI-K kindergarten readiness measure.

Regression Equation

$$Y_1 = (\beta \times Xper_1) + (\beta \times Xed_1) + (\beta \times Xatt_1) + (\beta \times Xdev_1) + e$$

$$Y_1 = (.44 \times 31_1) + (2.15 \times 8_1) + (1.66 \times 23_1) + (-.11 \times 10_1) + 144.51$$

$$Y_1 = 13.64_1 + 17.2_1 + 38.18_1 + -1.1_1 + 144.51 = -214.63$$

$$Y_2 = (\beta \times Xper_2) + (\beta \times Xed_2) + (\beta \times Xatt_2) + (\beta \times Xdev_2) + e$$

$$Y_2 = (.44 \times 32_2) + (2.15 \times 2_2) + (1.66 \times 25_2) + (-.11 \times 8_2) + 144.51$$

$$Y_2 = 14.08_2 + 4.3_2 + 41.5_2 + -.88_2 + 144.51 = - 205.27$$

$$Y_3 = (\beta \times Xper_3) + (\beta \times Xed_3) + (\beta \times Xatt_3) + (\beta \times Xdev_3) + e$$

$$Y_3 = (.44 \times 36_3) + (2.15 \times 3_3) + (1.66 \times 27_3) + (-.11 \times 8_3) + 144.51$$

$$Y_3 = 15.84_3 + 6.45_3 + 44.82_3 + -.88_3 + 144.51 = -145.39$$

A regression equation was computed to determine which individual predictor variable would be the highest weighted predictor when predicting children's readiness score on the ESI-K. The unstandardized betas, the sum of scores for each parent measure, and the standard error of estimate was computed in this equation. Given the regression equation $Y_1 = -214.63$, $Y_2 = -205.27$, $Y_3 = -145.39$. Therefore, Xatt, parents' attitudes towards school was the highest weighted predictor of readiness scores for the three individual participants. Although parents' perceptions of kindergarten readiness was the highest predictor of kindergarten readiness in the hierarchal regression model, parents' attitudes was weighted as the highest in the equation. This may be due the low variability in scores on the parents' attitudes measures which, contributed to the high unstandardized beta coefficient.

Chapter Five

Discussion

This study was conducted to examine how differences among low-income families are related to children's school readiness scores on the Early Screening Inventory –Kindergarten (ESI-K). Additionally, the study examined the predictive relationships of children's ethnicity, parent demographic variables, parent measures and ESI-K scores. The research sample consisted of 63 parents whose children took the ESI-K readiness assessment in September of 2003 and who completed and returned the consent form and questionnaire. This chapter discusses the results of the data analysis, giving special attention to findings that were significant and that may be useful for future practice. Furthermore, it will note the limitations of the study and suggest directions of future research.

Reliability of the Parent Measures

Four of the parent measures in the study (i.e., Parents' Perceptions of Kindergarten Readiness, Parents' Educational Experience, and Children's Early Development) were found to have relatively strong internal consistency. However, the Parents' Attitudes Towards Schools measure was slightly less reliable than the other three subscales (r=.62). There was very little variability in the scores on the Parent Attitudes Towards School measure; this is evidenced by the range in scores observed. The possible range of scores for this scale was 9 – 27, and observed range of scores was 22 - 27. This suggests that many of the items on this scale were rated high by parents. It is possible that

parents responded in a socially desirable manner the questions on this subscale (e.g., I set academic goals for my child; It's important to get good grades in school; Most teachers are good teachers). Future research should examine other ways of measuring this construct that may yield greater variability. Specifically by using a measure that directly measures parents' attitudes towards school.

Children's Classifications on the ESI-K

Descriptive data indicated that the mean ESI-K scores of children in this study were within the Ready range (M = 21, SD= 5). According to the authors of the ESI-K, children ages 5.0 – 5.6 with scores $\geq$ 18 and children over the age 5.6 with scores $\geq$ 21 are considered to be ready for kindergarten (Meisels et al, 1997). Previous research on the ESI-K indicated that four out of every five children administered the ESI-K are correctly classified. Reports also indicate that older children tend to perform better on items than younger children.

Research question one related to the percentage of children from low-income families score within the Ready, Getting Ready, and Not Ready categories on the ESI-K. The largest percentage of children identified as Ready was the majority group (Caucasian). A larger percentage of Caucasian children may have been identified as "Ready" in this study due to the significant percentage of participants from Robinson Elementary School (51%). Based on the demographic makeup of the schools in this study, Robinson Elementary School had the largest percentage of Caucasian students, indicating that a larger percentage of the children were Caucasian. However, this finding is consistent with earlier research which reported that Caucasian children were more likely to be considered as ready than other ethnic groups. Ellwein et al., (1991) found

significant differences in scores on the Brigance and the Daberon by children's ethnicity. The researchers found that Black children consistently scored lower than White children on the Brigance, the Daberon, and the Kindergarten Inventory Developmental Skills (KIDS).

Previous researchers also reported that children of more educated parents have higher levels of cognitive competencies and parent child interactions, which may affect school readiness (Boak et al., 1999; Mills, 1983). Results from the current study found a significant difference between children who were identified as Ready and their parents' educational attainment. The findings of this study are consistent with previous research in that results showed that parents with less than a high school education had fewer children who were classified as Ready when compared to parents with more education. No parents with bachelors or graduate degrees had children identified as Not Ready for school on the ESI-K.

Correlational Finding

When considering research question two, "What is the relationship between ESI-K scores and the eight independent variables from the study?" a correlation matrix yielded results indicating that significant correlations were observed between the four parent variables and ESI-K scores. Parents' education yielded a moderate correlation with children's ESI-K score (r = .46, p =.01). This was expected, as extensive research has documented powerful relationships between parents' education and children's school readiness (Britto, 2000). Parents of low-income children expect their children to be successful in school but do not know how to assist them in being successful (i.e., appropriate academic skills, or nutritional factors) (Moles, 1993). Additionally, some

schools may have barriers to successful school involvement, causing parents to develop a negative attitude towards school (Edwards, 1990). To prevent this barrier schools can provide parents with monthly newsletters to keep them informed of important highlights in the school. Additionally, schools can develop outreach programs and visit parents within the community to provide them with information related to helpful community resources. Parents' perceptions of school readiness also had a moderate correlation with children's ESI-K scores (r = .46, p = .01). A moderate correlation also was observed for Parents' Attitudes Towards School (r = .42, p = .01), indicating that parents who were more positive about the educational system also had children who had higher readiness scores. The significant negative correlation between children's early development score and ESI-K readiness score (r = -.29, p = .05) indicates that the higher the child's readiness score on the ESI-K, the less likely they experienced early developmental difficulties. These findings are consistent with Zills, Collins, West, & Hausken's (1995) earlier research findings showing that children with early developmental difficulties had more challenges in kindergarten than their peers who did not have developmental delays.

When considering research question three, "Which variables or combination of variables best predict low-income children's scores on the ESI-K?" all of the parent measures (parents' perceptions of kindergarten readiness, parents' education, parents' attitudes towards school, and children's developmental history) were found to significantly predict children's readiness scores on the ESI-K. The variables combined accounted for 41% of the variance, indicating parent variables are quite important in predicting children's school readiness. This suggests that working with parents to help them establish home environments that support children's readiness for school could

decrease the percentage of children who are not ready to enter formal school when they are age-eligible for kindergarten.

Parents' Perceptions of Kindergarten Readiness

As a single variable, parents' perception of kindergarten readiness explained 18% of the variance for kindergarten readiness scores. This is a particularly important finding given that it shows that parents are relatively good predictors of whether their children are ready for school or not. As such, if there were widely-available opportunities for interventions prior to beginning kindergarten for parents who perceived their children as not ready, these children could be given interventions to improve their overall readiness prior to even beginning school. As there was a large percentage of children considered to be ready in this study, most parents in this study likely knew what was expected of their children to be ready for kindergarten and prepared them based on their perceptions of readiness. However, it is important for future research to examine how much parents actually know about what educators expect from their children when they enter school and how this knowledge differs by ethnicity, socioeconomic status, etc.

Parents' Education

Parents' educational attainment was found to be a significant predictor of children's readiness scores and yielded a positive beta weight and correlation. Results of this study show that most children who scored in the Getting Ready and Not Ready categories were children of parents with less than a high school degree. Children of parents with college degrees did not score in the Not Ready category and children of parents with postgraduate degrees all scored in the Ready category. These findings suggest that parents with higher education attainment may have a better understanding of

what is expected of their children for kindergarten entry and also have the resources available to promote kindergarten readiness. Additionally, these parents may have more time available to prepare their children to be ready for kindergarten, which may result in higher readiness scores on kindergarten readiness measures. Also, these parents may have higher paying jobs/income, which may enable them to purchase the appropriate toys and materials to foster better school readiness skills. Previous research by Brooks et al. (2000) is consistent with the findings regarding parental education in the current study. These researchers reported that low family income has the greatest effect on children during early childhood, and is significantly related to low school readiness skills and delayed cognitive and behavioral development.

Parents' Attitudes Towards Schools

Parents' attitude towards school also was a significant predictor of ESI-K scores and yielded a strong positive relationship with school readiness. This is notable particularly in light of the fact that there was extreme restriction of range on this scale, which typically serves to suppress the correlation between variables. The scores from this scale suggest that all parents, regardless of ethnicity or educational attainment, view school as an important factor for their child's academic success. These findings are supported by McCaleb (1995), who reported that minority and low-income parents place high importance on education for their children and are concerned about their children's academic success. She added that, rather than educational values, the lack of appropriate resources to promote strong academic abilities may contribute to low academic achievement and school readiness skills among children from low income families.

Developmental History

The child's early development variable from the parent questionnaire was observed to have a negative correlation and beta weight with children's ESI-K scores. This variable was a negative predictor of ESI-K scores considered with other variables in the model. In addition, it yielded significant negative correlations with each of the subscales in the correlation matrix (see Appendix A). This indicates that children with more early developmental problems have more problems with school readiness. This finding suggests that early intervention is particularly important for this group of children to adequately prepare them to enter formal learning with their peers.

Limitations

An obvious limitation of the study is the reduced external validity. Since the participants were all low SES and drawn from only three schools in Hillsborough County, Florida., the results from the analysis may only be generalizable to parents and their children who are enrolled in schools like the ones described in this study and not the entire school population. Also, parents were asked to recall information about their children's readiness skills from the previous year and developmental information from previous years. This is problematic in that parents may not recall information correctly. Another potential limitation of the study is sample size. A larger sample likely would have introduced more variability into the measures and increased the statistical power of the study. Also, there was not very much variability in the ESI-K measure as a large proportion of children was considered as Ready. The relatively low internal consistency of the Parents' Attitudes Towards School measure may also be considered as a limitation in the study. The scale used in this study was a brief and modified (shortened) version of

the original survey used to measure children's attitudes towards school and teachers. Results showed that responses had considerable restriction of range, which may account for the relatively low internal consistency. This also may have affected the size of the correlation coefficients in the subsequent analyses.

Directions for Future Research

The results of the study point to a need for innovative approaches in providing early education services for children from low socioeconomic circumstances. As previous studies have shown, all parents regardless of income, education attainment, or ethnicity will like their children to be successful in school. However, schools do not appear to provide parents with clear indications of what skills children are expected and required to know prior to entering kindergarten.

Results from the four parent measures emphasize the value of a multifaceted concept of educational risk. Four different risk factors were employed in the present study. All were found to have some relationship to kindergartner's school readiness scores on the ESI-K, although the pattern of relationships varied across parent and child domains. Many researchers believe that low family income is the key factor behind low school readiness scores. The results of this research support this view. When parents' education was a factor, children's ESI-K classifications differed tremendously. However, compared to educational attainment, parents' perceptions of kindergarten readiness and parents' attitudes towards school were better predictors of the child's ESI-K readiness scores.

By showing the considerable variation that exists in the risk factors and difficulties of children who are about to start school, the study highlights the challenges that parents face in meeting the needs of their children when they have low education attainment, no clear understanding of what children are expected to know prior to school entry, and a negative view of their child's school. Educators must maintain the interest and promote the growth of children who have already demonstrated signs risk while simultaneously providing encouragement for parents to become active with their child's school. Similarly, they should provide parents with information packets regarding what skills are important for children to know prior to entering school. In addition, both parents and educators must meet the needs of children with difficulties early to provide them with the resources necessary to promote success. School psychologists can also play an important role by working with parents to encourage them to build strong relationships with their child and their child's teacher as well as help them understand how their attitudes and behaviors may impact their child's school-related skills. Although there has always been variation in the characteristics of children entering kindergarten, the commitment to meeting the educational and developmental needs of all children in an increasingly diverse society presents considerable challenges to teachers, schools, and communities. By understanding the risks that children from low income homes face, educators can do a better job of reaching out to families in the community to help them prepare their children to begin formal education.

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Appendices

Appendix A

Correlation Matrix

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. Readiness Scores	1.00										
2. Child's Age	.07	1.00									
3. Child's Gender	.06	.14	1.00								
4. Child's Ethnicity	.10	.04	.07	1.00							
5. Dev. Hx (SD)	-.21	-.17	-.09	.00	1.00						
6. Parents' length of time in US	-.06	.10	.05	.38**	.-02	1.00					
7. Parents' Education	.46**	-.06	.04	.08	-.33**	-.06	1.00				
8. Parents' Ethnicity	-.08	-.11	.04	.73**	.06	.52**	-.07	1.00			
9. Parents' Perceptions of K. Readiness (Total)	.46**	-.23	.08	.04	-.34**	-.00	.25*	.05	1.00		
10.Parents' Educational Experiences (Total)	.21	.07	.13	-.13	-.38**	-.11	.42**	-.20	.32*	1.00	
11. Parents' Attitudes Towards School (Total)	.42**	-.00	.13	.06	-.29*	.11	.22	.10	.15	.55**	1.00

Note: ** .Correlation is significant at the .01 level (2- tailed) * .Correlation is significant at the .05 level (2-tailed)

Appendix B

Parental Beliefs Questionnaire

Instructions: Please circle your response to each question below. This survey should take approximately 5-10 minutes to complete.

Descriptive Information

Please tell me about yourself……..

1. What is your ethnicity?

    1. African American/Black
    2. Caucasian/White
    3. Asian/Pacific Islander
    4. Native American
    5. Hispanic
    6. Multicultural
    7. Other (Describe: _____)

2. What is the ethnicity of your child who is in kindergarten this year?

    1. African American/Black
    2. Caucasian/White
    3. Asian/Pacific Islander
    4. Native American
    5. Hispanic
    6. Multicultural
    7. Other (Describe: _____)

3. How long have you lived in the U.S.?

    1. I was born in the United States and have lived here all of my life.
    2. Less than 1 year
    3. 1 to 2 years
    4. 3 to 4 years
    5. 5 to 10 years
    6. More than 10 years

4. What language do you usually speak at home?

    1. English only
    2. Spanish or another language other than English only
    3. A combination of English and Spanish or another language

5. What is the highest level of school you completed?

    1. Less than high school
    2. High school graduate
    3. Some college but no degree, or Associates Degree (2 year degree)
    4. Bachelor's degree
    5. Postgraduate degree

Section II

Please tell me about your child's Medical History…….

1. Was your child born three or more weeks premature? ☐ No ☐ Yes

2. Did the baby stay in the hospital longer than the mother? ☐ No ☐ Yes

3. While growing up, did your child have trouble walking, climbing, reaching, talking, holding on to things? ☐ No ☐ Yes

4. Did your child weigh less than 5.5 lbs at birth? ☐ No ☐ Yes

5. Has your child been diagnosed with any kind of disability? ☐ No ☐ Yes

6. Have you had any concerns about your child's vision? ☐ None ☐ A Little ☐ A Lot

7. Have you had any concerns about your child's hearing? ☐ None ☐ A Little ☐ A Lot

8. Were there any severe medical problems during the pregnancy? ☐ None ☐ A Little ☐ A Lot

Section III

When your child started kindergarten in August 2003, how ready did you think he or she was for kindergarten in each of the following areas?

Skill	Not Ready at All for Kindergarten	Somewhat Ready for Kindergarten	Definitely Ready for Kindergarten
Knowing the letters of the alphabet	1	2	3
Knowing how to count	1	2	3
Knowing how to use a pencil to write	1	2	3
Sitting still and paying attention	1	2	3
Getting along with other children	1	2	3
Being away from parents during the day	1	2	3

Speaking clearly	1	2	3
Taking turns and sharing	1	2	3
Showing enthusiasm for learning	1	2	3
Handling frustration appropriately	1	2	3
Following directions	1	2	3
Keeping track of own belongings (e.g., pencils, jacket, lunchbox)	1	2	3

Please check one……..

Thinking back to last August (2003), how well do you feel you understand what your child needed to know to be ready for kindergarten.

1. I understood very well. _____
2. I understood a little. _____
3. I did not understand at all. _____

Section IV

Please tell me about YOUR educational experiences…

For each statement below, please choose one of the following options and write that number on the line in front of the statement.

1= Not at all
2= A little
3= A lot

_____ 1. I enjoyed going to school.
_____ 2. The material presented in school was interesting to me.
_____ 3. My teachers helped me to do my best.
_____ 4. I am proud of what I accomplished in school.
_____ 5. The rules at my schools were fair.
_____ 6. My teachers were fair in grading my work.
_____ 7. I was a valued member of my school community.
_____ 8. My school experiences prepared me to be successful in life.

Section V

Please tell me how you feel about your child's school/teacher……..

Circle one response for each statement.	**Not at All**	**A Little**	**A Lot**
I relate well to my child's teachers.	1	2	3
School brings out the best in my child.	1	2	3
School is easy for my child.	1	2	3
School is important for my child.	1	2	3
Teachers make learning interesting for my child.	1	2	3
Teachers care about my child.	1	2	3
I set academic goals for my child.	1	2	3
It's important to get good grades in school.	1	2	3
Most teachers are good teachers.	1	2	3