

FAMILY RESILIENCE PROCESSES PREDICTING LOW-INCOME KINDERGARTEN
CHILDREN'S APPROACHES TO LEARNING AND READING ACHIEVEMENT

By

KACY A. MIXON

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To my family

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LIST OF TERMS

| | |
|--|---|
| Academic Achievement | Measure of student school success that is determined by standardized test scores (reading and math) (Schlee et al., 2009) |
| Approaches to Learning | Child behaviors inclusive of persistence on tasks, eagerness to learn, attentiveness, learning independence, flexibility, organization (Hair et al., 2006) |
| Children's Socio-emotional Development | Measure based on social and emotional factors related to child's adjustment to school (e.g. self-control, social interactions, interpersonal, externalizing/internalizing problem behavior) (Hair et al., 2006) |
| Culturally Diverse | Membership in a cultural group other than European American (Sue & Sue, 2003) |
| Deficit-based Theoretical Perspectives | Problem saturated theoretical approaches to research (Walsh, 2012) |
| Family Belief Systems | A subcategory of key processes in family resilience that includes making meaning of adversity, positive outlook and transcendence/spirituality (Walsh, 2012) |
| Family Communication | A subcategory within the key processes of family resilience that includes clear/consistent messages, open emotional expression, collaborative problem solving (Walsh, 2012) |
| Family Organizational Patterns | A subcategory of the key processes in family resilience that includes flexibility, connectedness, and social/economic resources (Walsh, 2012) |
| Family Processes | Various ways in which a family unit organizes, interacts, and maintains beliefs (Walsh, 2012) |
| Family Resilience Processes | Concept connected to a family's potential for recovery, repair, and growth when faced with serious life challenges (Walsh, 2012) |
| Parent-child Relationship | Characteristic interactions between parent and child. Indicators include family routines, discipline style, and parental emotional warmth (Brooks-Gunn & Markman, 2005) |
| Poverty | Total family income is less than the family's ability to meet basic needs (Children's Defense Fund, 2012) |

| | |
|------------------------|---|
| Reading Achievement | Measure based on various aspects of child's language development inclusive of letter recognition, beginning sounds, conventions of print, story knowledge, alphabet, early reading, and early writing (Hair et al., 2006) |
| Resilience | The ability to withstand and recover from difficult life challenges (Walsh, 2003) |
| Social Marginalization | Individuals experiencing unequal access to opportunities, institutional oppression because of culture, gender, or socioeconomic status (Framm et al., 2007) |
| Socioeconomic Status | Measure based on family income level, parental occupational status and parental education level (Bradley & Corwyn, 2002) |

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By

Kacy A. Mixon

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The purpose of this study was to use a family resilience theoretical perspective to identify three resilience factors in low-income families that influence children's academic success. Using data from 3,066 low-income families from the Early Childhood Longitudinal Study-Kindergarten (ECLS-K) database, relationships among indicators of three family resilience processes (i.e. family belief systems, family organizational patterns, and family communication) and children's school outcomes were examined. Comparisons between this study sample and the total ECLS study sample were reported. Significant differences by gender were reported for children's approaches to learning but not for their reading achievement. Although teacher's and parent's assessment of children's approaches to learning were strongly correlated with each other and with reading achievement, none of the family resilience variables predicted teacher's assessment of a children's approaches to learning. However, connectedness and open emotional expression significantly contributed to the prediction of parent's assessment of their child's approaches to learning and the family organization process of connectedness significantly contributed to the prediction of children's reading achievement scores. Although findings (i.e. confirmatory factor analysis, reliability, fit indexes) revealed that the hypothesized model showed promise for measuring the relationships between family resilience processes, reading and

children's approaches to learning, the final analysis revealed need for model adjustment.

Implications for research, theory and practice are discussed.

CHAPTER 1 INTRODUCTION

In 2010, 16.4 million children in the United States were considered poor and, of those, 7.4 million lived in extreme poverty (Children's Defense Fund, 2012). The number of school-aged children living in poverty increased from 15% to 19% between 2000 and 2010 and more than one million homeless children enrolled in the public schools during the 2010-2011 school year (Children's Defense Fund, 2010). Unfortunately, 32% of children who live in poverty for more than half of their lives do not graduate from high school. Moreover, the achievement gaps between high and low-income children in the current generation are 30 to 40% greater than one generation ago (Children's Defense Fund, 2012).

There is now a considerable body of research showing that poverty has a powerful effect on academic achievement (Rumberger, 1995; Schlee, Mullis, & Shriner, 2009). It is well documented that many children living in poverty experience poor academic achievement when compared to children living in families with higher income (Bradley & Corwyn, 2002; Duncan & Magnuson, 2005; Hair, Halle, Terry-Humen, Lavelle, & Calkins, 2006; Hopson & Lee, 2011; Leventhal, Fauth, & Brooks-Gunn, 2005). Researchers have reported significant relationships between children's academic achievement and their external environmental circumstances and family context. Specific factors associated with low-income children's school outcomes are their community environments (Church, Jagers, & Taylor, 2012; Leventhal et al., 2005), parent-child relationship dynamics (Bodovski & Youn, 2010; Connell & Prinz, 2002; Cheadle & Amato, 2011; Coplan, Hastings, Lagace-Seguin, & Moulton, 2002; Lunkenheimer, Shields, & Cortina, 2007; Morrison, Rimm-Kauffman, & Pianta, 2003), parental social support (Kalil & Ryan, 2010; Marshal, Noonan, McCartney, Marx, & Keefe, 2001; Moran & Ghate, 2005), and parent-school relationship (Horvat, Weininger, & Lareau, 2003; Jeynes, 2005; Lott, 2001).

Approaches to Learning

Children learn how to manage their emotions through observation, modeling, and social referencing (Morris, Silk, Steinberg, Myers, & Robinson, 2007) experienced in their home, school, and community contexts. Researchers have reported significant associations between the family context and aspects of children's school readiness and children's approaches to learning which is conceptualized as characteristics and behaviors children display while engaging in learning (Brooks-Gunn & Markman, 2005; Hair et al., 2006). Researchers have also reported positive associations between parental nurturance, discipline, teaching and children's language and school readiness factors (Brooks-Gunn & Markman, 2005). Children's persistence at tasks, eagerness to learn, attentiveness, learning independence, flexibility, and organization have also been shown to directly influence children's foundational skills in math and reading (Fantuzzo, Bulotski-Shearer, McDermott, McWayne, Frye, & Perlman, 2007; Li-Gining, Votruba-Drzal, Maldonado-Carrelflo, & Haas, 2010). Furthermore, researchers have found that socioeconomic resources (i.e. family income, parental education, neighborhood conditions) appear to directly influence the level of children's school readiness as well as the achievement tests scores of young children. (Duncan & Magnuson, 2005).

Reading Achievement

The initiation of Title I of the Elementary and Secondary Education Act in 1965 focused the attention on low-income children's reading outcomes (Kainz & Vernon-Feagans, 2007). Theorists frequently conceptualize children's reading development using an ecological literacy lens in which multiple influences (i.e. family literacy, classroom literacy, school/community literacy) interact to propel children forward in their reading development (Kainz & Vernon-Feagans, 2007).

The literature indicates that early parent-child interactions (prior to kindergarten) are strong predictors of low-income children's literacy development (Dodici, Draper, & Peterson, 2003). Despite advances in ecological reading theory development, research studies looking at low-income children's reading achievement from this theoretical framework are limited. However, in a study examining reading achievement and socioeconomic status, Kainz and Vernon-Feagans (2007), reported significant relationships among child and family variables (i.e. age at kindergarten, persistent low-income, parent education, family literacy) and children's reading skills in Kindergarten that varied by school variables (suburban location, economic segregation, minority segregation) rather than across grade levels.

Theoretical Framework

Most of the research examining the relationship between children's school achievement and low-income families' circumstances is anchored in a deficit-based perspective in which researchers have looked exclusively at low-income families' deficiencies or flaws. Such research efforts fail to consider the particular life contexts of low-income families or emphasize what they are *doing well* in shaping children's learning outcomes (Horvat et al., 2003; Jeynes, 2011). Proponents of more culturally responsive research approaches have argued that examining issues associated with school achievement using research frameworks that do not consider the larger external influences (i.e. family, community) impacting children's lives only capture surface issues connected to student underachievement and socio-emotional outcomes (Bradley & Corwyn, 2002; Shealey, 2006). Furthermore, Bradley and Corwyn (2002) argue that literature on low-income families and child well-being "provides bits and pieces of the larger person-process-context-time tableaux" (p. 379). Much of this muddled representation, the authors contend, can be attributed to low-income families struggling with contextual factors or circumstances (e.g. immigrant status, single family homes, disabled family members, etc.) that are known to affect

children. Thus, much of research on child well-being (i.e. health, socio-emotional development, cognitive and academic attainment) has failed to disentangle the influence of family and community factors from the influences of poverty.

There is, however, a growing emphasis in the mental and physical health fields and in the education field on focusing on client and family strengths (Anderson, 1997; Herth, 1990; Hubble, Duncan, & Miller, 1999; Miller, Duncan, Hubble, 1997; Sprenkle & Blow, 2004; Vellone, Rega, Galletti, & Cohen, 2006; Walsh, 2012). For instance, researchers in the nursing profession have found *hope* to be an important factor affecting cancer patients' coping, perceived control, and psychological adjustment (Vellone et al., 2006). Furthermore, restorative factors, such as hope and client expectancy, have been reported to contribute at least 15% of the variance explaining counseling and treatment outcomes (Hubble, et al, 1999; Lambert, 1992; Miller, et al, 1997). Within the family therapy field, identifying and utilizing family strengths is a common theme to gain insight on the possibilities for change (Anderson, 1997). Extra-therapeutic, factors-defined as client strengths, supportive elements in the client's environment, and chance events—have been shown to account for 40% of the variance in treatment outcomes (Hubble, et al, 1999; Lambert, 1992; Miller, et al, 1997) and have been reported as the strongest factor influencing effective therapeutic outcomes (Hubble, et al, 1999; Miller, et al, 1997). Thus, looking at the client's resources and outlook can be seen as an important pathway for promoting the possibilities for client change or healing.

Within the field of education, research reveals that focusing on family strengths influences successful school-family interactions. According to Amatea, Mixon, and McCarthy (2013), when educators look for areas of strength within families it allows for a positive shift in approaching children's learning. For example, utilizing a strength-based lens when

understanding and approaching school problems allows for less judgment in that the focus is not on impairments within the family, but families' ways of knowing—or family funds of knowledge (Moll & Gonzalez, 2004) that can be built upon to create possible solutions (Amatea et al., 2013). This perspective also facilitates an environment in which school personnel shift from an expert role in which the family is instructed on what is “right” to a more collaborative role where families and school personnel partner in developing solutions for the best interest of the child. Thus, school personnel utilizing a strength-based approach where they view “families as valued partners with their own unique strengths and contributions to their children’s learning” (Amatea et al., 2013, p. 1) creates greater possibilities for academic achievement as it incorporates the notion that families are an integral part of children reaching their academic potential.

Researchers have also focused on identifying the risk factors, protective factors, and turning points influencing individual development and well-being. For example, Fraser, Kirby and Smokowski (2004) define the concept of “turning point effects” as a life-altering event that alters an individuals’ developmental trajectory. They hypothesized that turning point effects would directly alter risk factors in that they would have the potential to introduce new possibilities into the way one views their present situation. To explain the variation in individual responses to similar stressful situations, researchers formulated the concept of personal resilience (Fraser, et al, 2004; Rutter, 2006). Resilience researchers initially focused on traits or characteristics inherent in individuals (Werner, 1995). However, the concept of resilience evolved to depict resilience as a dynamic process encompassing risk and protective factors experienced by individuals and influenced by the various relational contexts in which individuals are embedded (i.e. time, interpersonal relationships, socioeconomic status, cultural influences) (Walsh, 2012). Thus, rather than view resilience as a characteristic inherent within an individual,

resilience is now viewed as occurring in interactions one has within various relational contexts such as families (Rutter, 2006).

In contrast to early resilience research, which often studied how dysfunctional families contributed to individual risk (Walsh, 2012), recent researchers have begun to examine the positive ways that families respond to adverse circumstances, such as poverty. For example, a current trend in the research literature has been to identify certain aspects of family functioning such as family beliefs, role structures and communication patterns that characterize resilient families (Walsh, 2003). Utilizing a strength-based approach to discover what low-income families are *doing well* despite these various factors can combat the limitations of deficit-oriented research lens' to predict and influence child outcomes. Additionally, this type of research lens can effectively contribute to family-school engagement initiatives that promote academic success by promoting more inclusive practices. Supporters of a more culturally responsive examination of low-income families' influence on children's school performance suggest utilizing a family resilience framework (Amatea, Smith-Adcock, & Villares, 2006) to capture what families are doing well.

Proponents of culturally responsive research frameworks looking at marginalized populations, such as families in poverty, argue that examining issues associated with school achievement from research frameworks that do not consider larger external influences (i.e. family, community) will only capture surface issues connected to student underachievement (Shealey, 2006). Furthermore, there is a need for researchers examining socially marginalized populations to utilize strength-based approaches in efforts to effectively contribute to family-school engagement initiatives that promote academic success.

Research rooted in a family resilience theory provides a lens to describe the family interactional processes and contextual factors that influence child and family outcomes (Walsh, 2003) across time. Family resilience is defined as a family's potential for recovery, repair, and growth when faced with serious life struggles (Walsh, 2012; Walsh, 2003). This theoretical orientation was developed for family practitioners to identify family processes that can "reduce stress and vulnerability in high-risk situations, foster healing and growth out of crisis, and empower families to surmount prolonged adversity" (p. 405). Resilience theory has been shaped by over 30 years of social science research examining variables associated with resilience.

In Walsh's view, many families live with tremendous struggle. Thus, a family resilience framework provides a deeper understanding of both the constraints and possibilities embedded within families. In addition, a family resilience framework can provide a holistic view of both the "common elements in an adverse situation and effective family responses" without discounting family's unique perspectives, challenges, and resources (Walsh, 2012, p. 403). Furthermore, this framework can provide us with a more inclusive view of the impact of the larger social systems in which families are embedded.

Walsh's (2012) Family Resilience theory provides a complimentary strength-based lens "grounded in a deep conviction in the potential of all families to gain resilience and positive growth out of adversity" (p. 405). It is a framework that fuses ecological and developmental perspectives to view family processes in relationship not only to larger sociocultural contexts but also to the family's evolution across generations (Walsh, 2012; 2003). Walsh proposes that a broader, more systemic view of families is necessary in efforts to bring:

Attention to the entire relational network, identifying potential resources for resilience in the immediate and extended family. Positive contributions might be made by siblings, parents, and other caregivers, spouse or partners, grandparents

and godparents, aunts and uncles...Even in troubled families, islands of strengths and resilience can be found. (Walsh, 2012, p. 401)

Need for the Study

Family dynamics, specifically parent-child interactions, play a large role in children's educational and socio-emotional development (Bodovski & Youn, 2010). Past research examining family influences has focused on surface demographics such as parent occupation, education and family size (Hair et al., 2006). Current research now looks at parent-child relationships such as family parenting styles inherent in families and their impact on school achievement. For instance, there is a growing body of literature looking at parenting processes and parent-child interactions in low-income families and its impact on school outcomes (Bodovski, 2010; Cheadle & Amato, 2011; Heymann, & Earie, 2000).

As new research findings emerge, it becomes apparent that the lens through which we are looking at parental influence (parental context, parent-child relationship, family-school involvement) on children's academic achievement may be too narrow and lack a strength-based perspective. Expanding research to explore family processes (i.e. beliefs, relational dynamics, expectations) that influence children's school success, and contextual influences (i.e. social resources, family beliefs, etc.) that shape family flexibility might shed more light on the complexities associated with low-income family circumstances and children's school outcomes. A more exhaustive and strength-based picture of what influences the context surrounding low-income families—inclusive of belief systems, organization patterns and communication/problem solving--affecting school achievement may assist in schools being better equipped to develop family involvement strategies that better support children's academic potential.

Exploring family circumstances from a strength-based perspective is a recent trend in literature involving researchers focusing on family resilience—or the ability for families to

withstand and recover from difficult life challenges (Walsh, 2003). Commonly explored in resilience research is a focus on family beliefs, organization and communication (Walsh, 2003). However, researchers often look at just one of these areas. What is missing from the literature is a broader view of the resources that the families have and draw from to promote resilient responses to adverse circumstances, such as poverty. Additionally, literature reveals focus on parenting styles and school outcomes as well as family processes and school outcomes but not on family social resources and interactional patterns constructed by families that may impact school outcomes.

This study examined low-income families' resilience processes that were hypothesized to influence children's school outcomes. The ECLS-K data provides ample opportunity to study family resilience processes that influence child school outcomes. This can also create openings for family practitioners and school counselors to expand their view of the familial processes that contribute to children's academic achievement. Furthermore, it can provide information useful for teachers and other school personnel to deepen their understanding of family influences that foster children's successful school outcomes.

Purpose of the Study

The purpose of this study was to use a family resilience theoretical perspective to identify three resilience factors in low-income families that might influence children's academic success. Using the Early Childhood Longitudinal Study-Kindergarten (ECLS-K) database, the relationships among indicators of three family resilience processes (i.e. family belief systems, family organizational patterns, and family communication) and children's school outcomes were examined. It was theorized that the dependent variable (reading achievement) would be impacted by the independent variable (family resilience processes). In addition, the variable, approaches to

learning, would mediate the relationships between the independent variables (family resilience processes) and the dependent variable (reading achievement).

Research Question

The following research questions were used to examine the variables of interest in the study (see Figure 1-1):

1. Are there differences by gender in low-income children's reading achievement?
2. Are there differences by gender in low-income children's approaches to learning?
3. What are the relationships among indicators of low-income families' resilience processes (e.g. family belief systems, family organizational patterns, and family communication) and children's reading achievement?
4. What are the relationships among indicators of low-income families' resilience processes (e.g. family belief systems, family organizational patterns, and family communication), children's reading achievement and children's approaches to learning?

Overview of the Study

Chapter 1 provides not only an introduction to the scope of the problem but also the topic of this study and the theoretical framework used to explore the topic. Chapter 2 provides a review of the literature related to this topic. Chapter 3 details the methodology for the study inclusive of the use of secondary data and research design. Chapter 4 presents the results of hypothesis testing and Chapter 5 discusses these results and their implications for future research and professional practice.

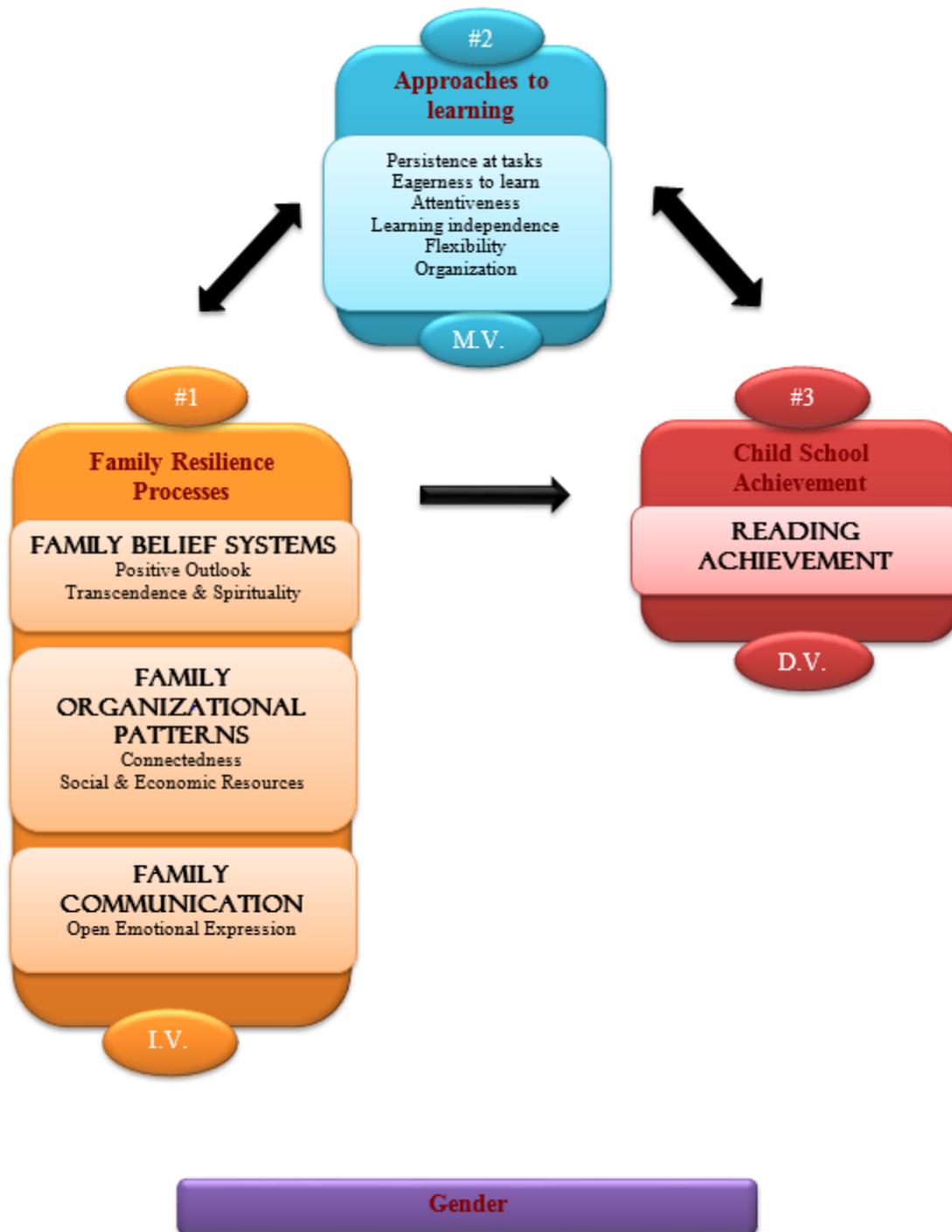


Figure 1-1. Construct model of variables

CHAPTER 2 REVIEW OF LITERATURE

The following literature review provides an overview of the findings of researchers who have assessed the influence on children's school achievement of specific family characteristics from a deficit-based perspective or a resilience-based perspective. First, the findings of researchers using a deficit-based perspective are presented. Then the findings from researchers utilizing a family resilience perspective are described. Within the resilience-based perspective, research exploring specific family processes associated with children's school achievement is reported.

Deficit-based Family Research

Much of the literature exploring the impact of low-income families on child school outcomes is rooted in a deficit-based perspective in which the deficiencies in these families are highlighted. The following section describes the findings from research examining the influence on children's school outcomes of: (a) the external context of the family, (b) the family's dynamics or (c) parental well-being.

Influence of the Family's External Context

One trend in the literature has been to explore the relationships among the family's external context (neighborhood influences, community services, etc.), their parenting practices, and child outcomes. Many of these studies only examine families with adolescents (Church, Wharton, & Taylor, 2009; Loeber & Farrington, 2000). However, the Fragile Families and Child Well-being Study (FFS) conducted by Church, et al. (2012), explored the relationships among neighborhood influences, poverty and negative child behaviors at two different five-year periods in a younger child population by means of parent interviews using multiple sampling methods (phone, in-person, field work). Using path analysis to assess the relationships among variables,

these researchers reported that perceived parental aggravation (i.e. being a parent is harder than I thought it would be; I feel trapped by my responsibilities,) was significantly related ($p < .001$) to problematic child behaviors and that neighborhood poverty was significantly related ($p < .001$) to parental aggravation. They concluded that these findings indicate, “that poverty has influence over parent perceived aggravation, or non-satisfaction in parenting and has a great effect on the behavior of young children” (p. 1038). The researchers used the theoretical lens of social control theory (i.e. when group norms are violated, negative behavior occurs) and differential association theory (i.e. negative behavior is learned and formed through social and cultural transmission) to explain their interpretation of the analyzed data.

In another study, Sanbonmatsu, Kling, Duncan, and Brooks-Gunn (2006) explored the impact of neighborhood influences on school achievement as indexed by school test scores. Researchers utilized data from the Moving to Opportunity Experiment that provided “families living in subsidized housing with the opportunity to move to neighborhoods with lower levels of poverty” (Sanbonmatsu et al., 2006, p. 5). Families ($n=4,248$) participated in a randomized treatment experiment (control, experimental, and Section 8 treatment groups). Researchers examined whether neighborhood context directly affected school outcomes. Findings showed no significant effects on children’s test scores for any child age group (ranging from 6-20 years).

Family Dynamics

Family dynamics, specifically parent-child interactions, play a large role in children’s educational and socio-emotional development (Bodovski & Youn, 2010). Although much of the early research examining family influences on child outcomes (Bradley & Corwyn, 2002; Hair et al., 2006) focused on general demographic characteristics or SES indicators (e.g. parent occupation, educational level or family size), a growing body of research literature has examined specific aspects of the parent-child relationship (i.e. parenting practices, parent-child dynamics)

in low-income families that impact children's school outcomes (Bodovski & Youn, 2010; Cheadle & Amato, 2011; Heymann, & Earie, 2000).

Recently, researchers have explored the influence of the family emotional climate on children's academic life. Bodovski and Youn (2010) utilized structural equation modeling with the ECLS-K data set to explore the relationships among family emotional climate and children's academic achievement and classroom behavior in a longitudinal study spanning from Kindergarten to 5th grade. The researchers operationalized family emotional climate as consisting of three variables: parental emotional warmth, parental depression, and use of physical discipline. These three variables were examined by race, ethnicity, and family structure to determine their association with achievement. Findings demonstrated that when parental depression was present, there was an increased likelihood that physical discipline would be used and parental warmth would be less likely to be present. In addition, the study revealed a significant relationship between parental depression when the child was in kindergarten and subsequent low 5th grade reading and math achievement in 5th grade. Differences in income levels, ethnicity, and family structure were also noted. For example, low-income, African American parents who were single reported more depressed symptoms than other income and ethnic groups. Moreover, Asian parents were more likely to report less parental warmth and less use of physical discipline, whereas African American parents were more likely to report greater parental warmth with higher frequency of use of physical discipline. Also, 5th grade children's outcomes in reading, math, and approaches to learning were lower when parental depression indicators (i.e. weekly frequency that the respondent has depressed feelings, respondent feels unable to 'shake the blues', respondent has feelings of sadness) were present.

Parental Well-Being

Maternal depression has been reportedly linked to perceptions of maternal role and parenting practices (Murry, Bynum, Body, Willert, & Stephens, 2001). Yeung, Linver and Brooks-Gunn (2002) analyzed data (n=753 children) from the Panel Study of Income Dynamics (Child Development Supplement) and reported that maternal emotional distress (economic pressures, mother's depressive affect) and parenting practices moderated family income and child outcomes (significant at the $p < .05$ level).

In another study Linver, Brooks-Gunn and Kohen (2002) explored potential mediating family factors (maternal emotional distress, maternal parenting styles and provision of cognitive stimulating activities) that might influence child development outcomes. Using quantitative methodology, the researchers studied 493 White and African American mothers with infants of low birth weight (considered premature), assessing cognitive abilities at ages 3 and 5. Findings showed that family environment (i.e. parenting practices and providing cognitive stimulation in the home) had significant mediating effects on the relationship between income and child outcomes. This study provided a more complex view of the nature of the low-income family context as it relates to child development and set a precedent for studying child outcomes over time. However, the theoretical framework (family stress model) guiding the research and measurements used may have limited a holistic view of the family environment. For example, measures were used to classify parenting types (authoritative and authoritarian), stemming from a euro-centric view of appropriate parenting practices. Furthermore, the measurement (The Home Learning combination scale) used to evaluate the home environment (or the degree to which families facilitated cognitive stimulating activities) included questions about parent-child interactions that seemed to be shaped by the norms of the dominant culture which fails to take into consideration cultural and family norms.

Deficit-based Research Limitations

The growing body of research focusing on the parenting practices and interactional processes of families living in poverty and how these factors influence low-income children's school outcomes (Bodovski, 2010; Bodovski & Youn, 2010; Cheadle & Amato, 2011; Heymann, & Earie, 2000) still provide an incomplete picture. Furthermore, attention has been placed on parent involvement in schools (Jeynes, 2011) and other contexts (community, extended family, friends, etc.) from which families in poverty may draw support (Church et al., 2012), however, effective intervention strategies and policies directly influencing low-income families have yet to become fully established and researched. Although research has expanded, direct links between children's school success, poverty, and factors linked to how low-income families function remain unclear.

If research on low-income families is not carefully designed it may perpetuate existing stigmas. Furthermore, research initiatives utilizing language that categorizes impoverished families as "fragile" may unintentionally disempower this already marginalized population and can produce findings that are not fully representative of the families' circumstances. For example, the Fragile Families and Child Well-being (FFS) research initiative (Reichman, Teitler, Garfinkel, & McLanahan, 2001) which studied 4700 couples (3600 unwed, 1100 married) aimed to provide information surrounding the circumstances of new, unmarried parents and their children's well-being and father's capabilities. This research sought to explore how public policies affect behaviors and circumstances surrounding these families. The research questions for this initiative do not directly target low-income families; however, the objectives of the FFS study are to focus on unmarried families and on families receiving welfare. Although the aims of the study --to gain information for policy reform in order to increase fatherhood involvement, healthy family interactions, and financial security--- are well intended, the assumptions guiding

this research agenda are rooted in deficit-based and outdated assumptions (e.g. the nuclear family form is supreme) about what is needed for children to thrive. These foundational assumptions fail to incorporate not only decades of research highlighting positive outcomes within alternative family forms (LGBT families, single-parent families), but they also fail to address elements, such as domestic violence, that can negatively affect children's well-being even in traditional nuclear family households.

As new research findings emerge, it becomes apparent that the lens through which we are looking at the family's influence (e.g. family processes, parenting, and family-school involvement) on children's academic achievement may be too narrow. Duncan and Magnuson (2005) discuss the need to examine not only how socioeconomic status is measured in child school outcome research but also how such research findings can inform policies directly affecting low-income children. The authors account for various approaches researchers' use when measuring SES. One such approach assumes "social position as well as the privileges and prestige that derive from access to economic and social resources" (p. 37) using either one indicator (occupation) or combined indicators (e.g. parental education and occupation). These authors propose a multidimensional approach that utilizes various components of SES based on the "premise that various socioeconomic resources contribute to social inequality and stratification along differing economic and social dimensions" (p. 38). Consequently, various components of SES (i.e. income, education, family structure, and neighborhood) affect children in different ways. For instance, a child in a low-income family with one caregiver, who has not completed high school and works two jobs, with little community support, can experience poverty differently from a child who lives in a low-income, multigenerational household with

strong positive community ties and family members who have completed at least 2 years of college. The authors further assert:

Accounting studies find that differences in socioeconomic status explain about half a standard deviation of the initial achievement gaps. But because none of the accounting studies are able to adjust for a full set of genetic and other confounding causes of achievement, we regard them as providing upper-bound estimates of the role of family socioeconomic status. (p. 40)

Duncan and Magnuson (2005) open the door to an approach to measuring SES that is more inclusive of various low-income family experiences, expanding research even further to explore relational processes influencing families—such as family belief systems, organization patterns and communication and problem solving practices--would provide a broader lens for examining the complexities of low-income families' influences on child school outcomes. Moreover, an exhaustive, resilience-based picture of influences affecting low-income children's school achievement may assist schools in developing family involvement strategies that better support students. While it can be argued that there is substantial research utilizing resilience theory approaches when looking at poverty and child outcomes (Fraser, 2004), not all resilience-based approaches include aspects of larger societal and generational influences. Furthermore, traditional resilience theories focus on traits inherent in individuals rather than in the family as a whole. Thus, what has been missing from these conceptualizations is the recognition of the interconnection between family resilience factors in low-income families and child school outcomes.

Resilience-based Family Research

Literature reveals a focus on parenting styles and school outcomes, but not on self-constructed family processes that can impact school outcomes. Walsh (2012) sees the family as active participants in constructing their external environment. For instance, family beliefs shape how they interact with the outside world and are one aspect of family resilience processes

reciprocally influencing a family's external environment. Research utilizing this perspective allows for a more strength-based view as it assumes that family members have an active role in constructing the external environment instead of viewing it as linear or uni-directional. Family resilience theory, unlike other resilience models, focuses on common family interactional processes depicted by responses among families experiencing adversity while also being mindful of the uniqueness (perspectives, challenges, and resources) within families. (Walsh, 2012; 2003) A family resilience framework can protect researchers from exclusively seeing low-income families as impaired. Instead, researchers can view families as confronted by struggle and having the potential to overcome adversity.

Three types of family processes have been observed in resilient families: (a) family belief systems, (b) family organizational patterns, and (c) family communication and problem solving practices (Walsh, 2012). Family belief systems encompass three areas: (a) making meaning of adversity, (b) positive outlook, and (c) transcendence and spirituality. Family organizational patterns are defined in terms of: (a) family flexibility, (b) connectedness, and (c) social and economic resources. Walsh describes family communication and problem solving practices as families demonstrating: (a) clear, consistent messages, (b) open emotional expression, and (c) collaborative problem solving (Walsh, 2012).

To further support the need for a theoretical framework for describing relevant family processes, one can look at the research of Lansford, Ceballo, Abbey, and Steward (2001). These researchers utilized the National Survey of Families and Households database (799 families participating) to assess the relationships among family processes, parental well-being, and child well-being among families differing in their structure (single-parent, blended, adoptive and two

biological parent households). Results of the study revealed that *family processes* were a much better predictor of parental and child well-being than family structure alone.

Belief Systems

Wright and Bell (2009) assert that family belief systems have a powerful influence on how family members view adversity. Furthermore, Walsh (2012) asserts that, “shared constructions of reality, influenced by multigenerational, cultural, and spiritual beliefs, emerge through family and social transactions” (p. 407). The following section expands on each of the three aspects of family beliefs proposed by Walsh.

Positive outlook. One aspect of family resilience theory included within the overarching factor of family beliefs is positive outlook. Walsh (2012) asserts that hope is an important component of one’s positive outlook as it assists in overcoming circumstances that are limiting and offers positive neurophysiological effects when dealing with stress. A common practice in the medical community when treating terminal illness is the notion of “fostering hope” in which hope can be defined as an “inner power directed toward the enrichment of being” (Herth, 1990, p. 1250). Furthermore, family therapists and other psychotherapy professionals have found it useful to utilize interventions that enhance positive outlook (positive psychology, strength-based therapy) when working with families struggling with adverse circumstances. For example, positive psychology—a method of inquiry exploring “what works, what is right, and what is improving” for clients (Sheldon & King, 2001, p. 216)—creates opportunity for clinicians to develop more strength oriented perspectives surrounding client struggles.

Families considered to be well-functioning have been found to hold beliefs that embrace positive views of life circumstances (Beavers & Hampson, 2003) and are seen as having a sense of wellness—or “a way of life oriented toward optimal health and well-being in which mind, body, and spirit are integrated by the individual to live more fully” (Myers, Sweeney, & Witmer,

2000, p. 252). Thus, wellness in research commonly includes measures that require participant self-appraisal of not only their sense of well-being (e.g. 5F-Wel-A) (Hattie, Myers, & Sweeney, 2004) but also participant perceptions about how they see themselves influencing their own circumstances. Relating to family processes, it can be argued that, in addition to whatever adversity family member's experience, the ways in which families evaluate their own well-being is evidence of level of resilience.

Transcendence and spirituality. Walsh (2012) asserts that more often than not, “families seek strength, comfort, and guidance in troubled times through connections with their cultural and spiritual traditions, especially those facing barriers of poverty and discrimination” (p. 409). Pearce and Axin (1998) reported that religion was influential in improving the parent-child bond for mothers. Other researchers have shown its influential effect on father-child relationships (Smith & Kim, 2003). Researchers Bartkowski, Xu and Levin (2008) assert that both religion and spirituality seem to play an important role in family dynamics. However, it is unclear how this construct affects the development of young children. Thus, Bartkowski, et al. (2008) explored circumstances in which religiosity promoted or undermined the emotional adjustment and social competence of children. They utilized the ECLS-K data to operationalize religion/spirituality as “structural resources within a household that influences relationships between persons” (p. 21) as opposed to a more traditional way of researching this variable in individual reports of parental religiosity. Findings revealed no significant relationships between discussions surrounding religion with children, couple arguments about religion, and children's self-control. However, these researchers did report that children who attended religious services with mothers more often than with fathers showed indications of greater self-control.

Furthermore, children whose parents attended religious services were shown to demonstrate higher social skills within the home.

Moore and Vandivere's (2007) article in *Social Indicators Research* aimed to describe how longitudinal indicators—or “measures of a family or individual behavior, interaction, attitude, or value that is measured consistently or comparably across multiple points in time and cumulated to provide a portrait of an important aspect of family life over time” (p. 57)—could be conceptualized and developed to provide more in depth assessments of family experiences. The authors included examples of sound longitudinal indicators (i.e. chronic poverty, physical health) that are simple to operationalize because they hinder well-being. The authors, however, caution researching the construct of religiosity—or spirituality—as it can be controversial in terms of how it is operationalized. For example, operationalization may stem from culturally specific “norms and values that vary across society” (p.64). In addition, the absence of this construct within families is not considered “bad” for children or crucial to their well-being. Even more, the author's articulate instances in which extreme forms of religiosity can impair children's development (cults, fanaticism). In line with family resilience theory's conceptualization of belief systems as a subcategory within family resilience factors, the authors, Moore and Vandivere (2007), suggest coupling religiosity with alternative positive indicators (i.e. cultural traditions).

It may be argued that research studying how families culturally socialize their children has typically focused on older cohorts (i.e. adolescents, young adults) and may not shed insight into the experiences of families with younger children. However, Lesane-Brown, Brown, Tanner-Smith and Bruce (2010) reported meaningful findings in their ECLS-K study exploring how often families socialize to cultural heritage (race/ethnicity) at a young age. Consistent with

findings of ethnic stratification, White families do not socialize their children as much as their non-White (Black, Hispanic, Asian, Native Hawaiian/Pacific Islander, American Indian, multiracial) counterparts. Thus, this indicator, if further researched could provide further insight into the relationship between family resilience factors inclusive of cultural heritage socialization and child school outcomes.

Family Organizational Patterns

Walsh (2012) claims that “the family, peer group, community resources, school or work settings, and other social systems can be seen as nested contexts for nurturing and reinforcing resilience” (p. 402). The following expands on the organizational patterns proposed by Walsh.

Connectedness. Clark (1983) highlights variability in the connections poor families’ are able to provide. Furthermore, despite facing struggles, there are poor families that build and maintain strong ties that influence academic achievement. Exploring family resilience processes as they relate to social and economic resources requires an understanding of a concept called social capital. Murry, Bynum, Brody, Wilbert and Stephens (2001) assert that a family’s social capital—or the various processes parents utilize to advance children’s chances of success—is dependent upon parents’ capacity to connect to extrafamilial support. In their exhaustive review of research exploring family structure, maternal well-being, child development outcomes, parenting processes, and African American single mothers’ experiences, Murry, et al. (2001) highlight that a disconnect from economic and social resources, often faced by this population, exacerbates issues such as mothers’ psychological functioning.

Marshall, Noonan, McCartney, Marx, and Keefe (2001) utilize a popular African adage in their article titled *It Takes an Urban Village: Parenting Networks of Urban Families* to emphasize the supportive relational networks common in families living in urban areas. Researchers used a sample of 206 African American, Hispanic and European American families

with elementary aged school children to explore parental social networks (family, friends, and neighbors). Utilizing multiple regression analysis, they found that these social networks have indirect effects on children's socio-emotional outcomes when moderated by parenting behaviors (warmth and responsiveness; providing cognitive stimulation for children) and efficacy (ability to cope when raising children).

Social networks and economic resources. It is readily known that parental involvement in children's education has a large impact on school achievement and adjustment (Anderson, 2000; Barnard, 2004; Epstein, 1990; Epstein & Dauber, 1991; Jeynes, 2011). Research focusing on culturally diverse families has demonstrated the various ways that parent involvement can occur (Bouffard, Bridgall, & Weiss, 2008). Traditional school involvement practices (such as attending parent-teacher conferences, attendance in PTA meetings, volunteering, etc.) are more typical for European American (or euro-centric) and higher SES groups. Hence, family-school involvement practices that neglect to take into consideration effective ways that culturally diverse and low-income families' contribute to their children's learning can devalue these families' contributions (Casper, Traub, & Little, 2002; Horvat et al., 2003; Lareau, 2000). School personnel and researchers often misinterpret non-traditional forms of contributing to children's learning as parental indifference (Gay, 2000). Low-income parents, in particular, are vulnerable to social marginalization in schools. For instance, Lott (2001) has reported that the social marginalization experienced by many low income families was perpetuated when school personnel subscribed to a belief that low-income parents cared little about their children's education and failed to engage in traditional school involvement activities. Additionally, it is common for low-income parents to experience intimidation and disrespect when interacting with

schools (Bloom, 2001; Lareau, 2000; Lareau, 2003). These create disconnected family-school relationships and eliminate school as an avenue for families to use as a resource.

Bloom's (2001) study of low-income, single mother's school involvement argues that due to increased family demands and adverse circumstances low-income mothers are unable to subscribe to normative mothering roles that are expected by schools. The author also noted that mothers living in poverty often do not have access to the same skills and resources that middle-class mothers with traditional school involvement practices have and the task of school-based family involvement, without such resources (i.e. emotional well-being, flexible schedules, financial stability, a sense of entitlement to be involved in schools) can prove to be very demanding. Thus, the researcher engaged in an ethnographic study exploring the implementation of an advocacy plan that a group of single, low-income mothers implemented via involvement with a community-based organization. Findings revealed that mothers in the study hoped to improve what they perceived to be extremely strained relationships between home and school interactions.

Family Communication

"Communication processes facilitate resilience by bringing informational clarity to crisis situations, encouraging open emotional sharing, and fostering collaborative problems solving and preparedness" (Walsh, 2012, p. 412). Emotional expression and communication patterns can look quite different among families. Thus, cultural norms, influenced by family circumstances, community environment, culture/ethnicity, socioeconomic status, etc., vary from family to family.

Open emotional expression. Walsh (2012) asserts that openness within the dynamics of family and parent-child communication processes (i.e. trust, empathy, and tolerance for differences) can soften the effects of chronic family stressors. Proponents of more culturally

integrative measures for assessing the benefits of differing parenting styles argue that the benefits of an authoritative parenting strategy seen in White, middle class families do not necessarily generalize to lower income, culturally diverse family populations (Gray & Steinberg, 1999; Murry et al., 2001). For instance, community or neighborhood dangers and/or negative peer influence are factors that do not influence White, middle class families to the same extent as they do their marginalized counterparts. Murry, et al. (2001) argue that parenting practices, often for low-income African American parents, necessitate adapting parenting practices (i.e. authoritarian) to fit the circumstances in which they are embedded in efforts to protect their children from harm. However, the ways in which the construct (authoritarian parenting style) is measured may not reflect the actual open emotional expression that does take place within low-income families. Clark (1983) shows that many low-income urban families demonstrate positive verbal and non-verbal appraisals within family interactions. Furthermore, research aimed at exploring nurturing conversations (Conger & Conger, 2002) and empathy between members (Conger & Elder, 1994) of low-income families has been shown to influence student success.

Conclusion

Traditional lenses looking at how families contribute or are involved in their children's education tend to discount the ways that marginalized families are engaged in (i.e. providing nurturance, instilling traditions/values, etc.) and influence their children's education (Bower & Griffin, 2011). Thus, a more exhaustive and strength-based picture of how family processes influence school achievement is needed. A research lens rooted in family resilience theory refrains from seeing families as impaired. Instead, this perspective looks at families as confronted by struggle and having the potential to overcome adversity by focusing on effective family processes and resources embedded in families.

Studies utilizing a family resilience framework can protect against further marginalization of low-income family populations by providing a broader understanding of family resilience factors in low-income families. Research looking at family resilience factors that positively influence child school outcomes can assist in schools being better equipped to develop family involvement strategies that better support parent-child relationships. Consequently, this information can shape how schools define family involvement to be more inclusive of low-income families and create opportunities for family practitioners and school counselors to expand their view of the familial processes in efforts to build and promote family resilience.

CHAPTER 3 METHODOLOGY

This study explores the impact of low-income families' resilience processes on children's approaches to learning and reading achievement. The purpose of this chapter is to provide an overview of the methodology utilized in the study including a description of the setting, participants, variables, instrumentation, data collection and data analysis. The impacts of the following family resilience variables were assessed: a) family belief systems, b) family organizational patterns, and c) family communication practices. In addition, indicators of children's approaches to learning were assessed to determine whether they had a mediating effect on the relationships among family resilience processes and children's reading achievement.

Design of the Study

This study utilized a multivariate design to assess the contribution of several family process variables to the prediction of children's social adjustment and reading achievement outcomes. Data from The Early Childhood Longitudinal Study, kindergarten Class of 1998-1999 (ECLS-K) was used in the study. This is a data set collected by the National Center for Education Statistics (NCES) following the same children from kindergarten through the 8th grade. Information regarding children's cognitive, social, emotional and physical development was collected. In addition, information connected to student family, school, and classroom environment was gathered. The ECLS-K was designed to gain information surrounding three areas inclusive of schooling and performance, status and transitions, and the interaction of school, family, and community. Evaluators, trained to assess children in school, collected information on students at school as well as from students' families via the telephone.

Information collected from school personnel (i.e. teachers, administrators) was conducted through questionnaires administered at their respective schools.

This particular data set was chosen for a number of reasons. First it has a large sample size that meets the requirements necessary to perform structural equation modeling despite selecting a subset (children in poverty) of the overall participant population. Secondly, the data set was readily available to the public. Furthermore, the ECLS-K data allows for longitudinal analysis. Also, it is commonly used in education research. Though this study does not use the data set in this capacity, it provided opportunities to begin to examine family variables at the base-level of children's educational development. NCES currently has started developing another data set by gathering data from a recent cohort of kindergarten children who will be followed throughout grade school. However, this more recent data set is not longitudinal which would make it hard to begin to establish the links between family resilience and children's school performance over time. Thus, this study provides a baseline for which future research endeavors can build upon.

This study theorized that the dependent variable (reading achievement) would be impacted by the independent variables (family resilience processes). In addition, the variable, approaches to learning, was theorized to mediate the relationships between the independent variables (family resilience processes) and the dependent variable (reading achievement). Gender differences in reading achievement and approaches to learning in the study sample were also examined.

Definitions of Variables

The variables used for the study were: family resilience processes (i.e. family belief systems, family organizational patterns, family communication), approaches to learning, and reading achievement. Operational definitions of the variables include:

Family Resilience Processes: Measuring a family's potential for recovery, repair, and growth when faced with serious life challenges based on families self-report Subcategories for this variable include:

a) Belief Systems: A subcategory of key processes in family resilience that includes making meaning of adversity, positive outlook and transcendence/spirituality. Latent variable comprised of observable indicators from parent surveys

b) Organizational Patterns: A subcategory of the key processes in family resilience that includes flexibility, connectedness, and social/economic resources. Latent variable comprised of observable indicators from parent surveys

c) Communication: A subcategory within the key processes of family resilience that includes clear/consistent messages, open emotional expression, collaborative problem solving. Latent variable comprised of observable indicators from parent surveys

Approaches to Learning: Child behaviors inclusive of persistence on tasks, eagerness to learn, attentiveness, learning independence, flexibility, organization

Reading Achievement: Measure (item response score) based on children's general knowledge of language and literacy

Gender: Measure indicating identification as female or male

Race: Measure indicating membership into a cultural group

Families in Poverty: Measure used to determine participants that qualify under the federal poverty level based on family income at the time of data collection

Participants

The participants for the ECLS-K longitudinal study consisted of a sample of 17,219 first-time kindergarten students (from both public and private schools). The students belonged to a nationally representative cohort of children attending kindergarten during the 1998-1999 school year. Students were surveyed as well as their parents, teachers, and other school personnel. This study examined data collected for the kindergarten students in the 1998-1999 school year. This study included students whose family income qualified as in poverty based upon the federal poverty level income standards (i.e. an income level less than or equal to \$18,400 for a family of four) (Gershoff, 2001). The total number of participants in the data set whose families fell in this poverty level category was 3,066.

Inclusion and Accessibility

A distinctive feature of the ECLS-K data set was that it oversampled Hispanic, Asian and Pacific Islander children (NCES, 2001). The ECLS-K researchers developed protocols and materials that maximized inclusion of children and their families whose primary language was not English (i.e. translating assessments/interviews, use of translators, etc.). Interviews with parents who spoke languages other than English were conducted by translating the parent questionnaire into Spanish, Chinese, Lakota, and Hmong (NCES, 2001). In addition, the data collection process accommodated children with special needs and their respective families. However, children requiring Braille or sign language and children who had Individualized Education Plans/Individualized Family Service Plans indicating they should not be assessed were excluded from the child assessments.

Participant Incentives

The ECLS-K researchers gave various incentives to participants upon completion of their respective survey or assessment. Kindergarten child participants were given an ECLS-K incentive of a multicolored pencil upon completion of assessments. Parents were mailed a thank you letter as well as a copy of a Department of Education publication related to educational activities for families. Teachers who completed child-level questionnaires in the fall received \$5 and \$7 for completed questionnaires in the spring. Schools received \$100 and \$5 for every completed student abstract—or demographic information.

Instrumentation

For the purposes of this study, data collected from direct child assessments, parent interviews, and teacher questionnaires from the ECLS-K Fall 1998 Kindergarten were used. Various existing demographic variables from the ECLS-K data were utilized. For instance, gender, race, poverty and other variables connected to participant demographics were used. Also

utilized were data from the children's' approaches to learning scale and reading assessment. Selected items from the parent survey were used to assess family resilience processes. Copies and detailed descriptions of nearly all measures used are provided by the National Center for Educational Statistics (NCES) on the ECLS-K website at <http://nces.ed.gov/ecls/>. Details surrounding variable descriptions are provided by the Regents of the University of Michigan on the Research Connections website at <http://www.researchconnections.org/childcare/ssvd/studies/28023/variables>.

Approaches to Learning Scales

The Approaches to Learning scales included items comprised of parent and teacher questionnaires from the ECLS-K Fall 1998 data. The facets of this construct include: a) persistence at tasks, b) eagerness to learn, c) attentiveness, d) learning independence, e) flexibility, and f) organization. This measurement, developed by NCES, has reported reliabilities ranging from .8 to .9. Although the measure is based on teacher judgments, previous studies have used these measures and indicated both validity and reliability (Bodovski & Farkas, 2008; Tach & Farkas, 2006).

Teacher rating. In the teacher interview, respondents were asked to indicate how frequently the child exhibited the following behaviors or characteristics. The response scale included four points ranging from "1 = never" to "4 = very often," and there was also a "-7 = no opportunity to observe" option. This subscale was composed of the following survey items: a) Keeps belongings organized b) Shows eagerness to learn new things c) Works independently d) Easily adapts to changes in routine e) Persists in completing tasks f) Pays attention well. This subscale was created only if there were valid data on at least 4 of the 6 of the items. The subscale score is computed as the mean of the items comprising the score.

Parent rating. The ECLS-K approaches to learning subscale was created and used only if there were valid data on at least 4 of the 6 of the items. The subscale score is computed as the mean of the items comprising the score. Parents indicated how frequently the child exhibited the following behaviors or characteristics. The response scale included four points ranging from “1 = never” to “4 = very often” and was comprised of the following items: a) Keep working at something until {he/she} is finished? b) Show interest in a variety of things? c) Concentrate on a task and ignore distractions? d) Help with chores? e) Eager to learn new things? f) Creative in work or in play? This subscale was created only if there were valid data on at least 4 of the 6 of the items.

Reading Assessment

The reading test used to comprise this variable involves a direct child assessment providing information connected to children’s reading outcomes. For the 1998-1999 kindergarten assessment, this instrument provides information about Kindergarten children’s general knowledge in language and literacy. The items on this instrument were developed based on the recommendations from the National Assessment of Educational Progress (NAEP) reading framework, literacy curriculum consultants, outcomes of kindergarten focus groups and teacher reviewers. Reading achievement will be measured using scale scores based off of Item Response Theory (IRT) for the fall kindergarten assessment.

Family Resilience Processes

The independent variable, family resilience processes, was constructed through indicators within three subcategories: a) family beliefs systems, b) family organizational patterns, c) family communication processes. The construct model “family resilience factors” was developed based on family resilience theory’s key processes in family resilience (Walsh, 2003). The ECLS-K Fall 1998 data set contained questions indexing the three key processes in family resilience. Although

the data set did not have questions that assessed indicate four of the nine subcategories, items in the data set were used to assess the remaining five subsection (positive outlook, transcendence and spirituality, connectedness, social and economic resources, open emotional expression) within each key process category (i.e. family belief systems, family organizational patterns, family communication). Thus, this study aims to utilize the data that does connect to the remaining five subsections (positive outlook, transcendence and spirituality, connectedness, social and economic resources, open emotional expression) within each key process category (i.e. family belief systems, family organizational patterns, family communication).

Table 3-1 through Table 3-3 outline the parent questionnaire items that correspond to each of the subcategories that comprise the family resilience processes model. The directionality of the answers to survey items are indicated within the contents of these 3 tables. Two of the subcategories, belief systems and organizational patterns were further divided into subsections and connected to items within the parent questionnaire. For example, “family belief systems” is divided into two categories (positive outlook and transcendence/spirituality) and parental questionnaire indicators connecting to those subsections are listed in Table 3-1.

Scores for the following constructs, a) family belief systems, b) family organizational patterns, c) family communication, were then evaluated using factor analysis to determine if the individual items composing each of the construct scores were associated with its underlying construct. The following constructs, a) family belief systems, b) family organizational patterns, c) family communication, will be evaluated to determine if the construct can be conceptualized as components of family resilience factors.

Data Collection Procedures

Data collection for the ECLS-K for kindergarten questionnaires began in fall 1998 and continued in spring of 1999. Data from parent interviews was collected in fall and spring of the

1998-99 school year. Variable names that start with “P1” indicate data collected in fall 1998 and variables beginning with “P2” indicated data from spring 1999 (See tables 3-1, 3-2, and 3-4). Teacher interviews were collected in spring 1999 as well as child assessment data (reading and approaches to learning). The information for the data set was collected utilizing various methods including: one-on-one assessments, computer-assisted telephone interviews (e.g. CATI), and self-administered questionnaires. The parent interviews consisted of a 45-50 minute interview conducted by a trained interviewer who phoned the parent at their home. Parent answers were recorded using computer assisted interviewing methods unless the parent did not have a phone. In this case, in-person interviews were conducted. Teachers and administrators were given paper and pencil surveys to complete at their respective schools. Assessors who visited the child’s school collected data from children. The direct child assessment was un-timed, organized one-on-one with each child and took an average of 50-70 minutes.

Hypotheses

The following hypotheses were tested in the study:

- H1.** There is a significant difference by student gender in children’s reading achievement.
- H2.** There is a significant difference by student gender in parent’s report of student approaches to learning.
- H3.** There is a significant difference by student gender in teacher’s report of student approaches to learning.
- H4.** There is a significant relationship between teachers’ report of student approaches to learning and student reading achievement.
- H5.** There is a significant relationship between parents’ report of student approaches to learning and student reading achievement.
- H6.** There is a significant relationship between parents’ report of student approaches to learning and teachers’ report of student approaches to learning.

- H7.** There is a significant contribution of family resilience processes (family belief systems-positive outlook, family organizational patterns-connectedness, family communication-open, emotional expression) to the prediction of student reading achievement.
- H8.** There is a significant contribution of family resilience processes (family belief systems-positive outlook, family organizational patterns-connectedness, and family communication-
- H9.** There is a significant effect of students' approaches to learning in mediating the relationships between family resilience processes and reading achievement.

Summary

The purpose of this study was to use a family resilience theoretical perspective to identify three resilience factors in low-income families that influence children's academic success. Using the Early Childhood Longitudinal Study-Kindergarten (ECLS-K) database, relationships among indicators of three family resilience processes (i.e. family belief systems, family organizational patterns, and family communication) and children's school outcomes were examined. Data was analyzed using structural equation modeling. The results of the data analysis are presented in Chapter 4 and discussion of these results is included in Chapter 5 along with a discussion of the study limitations and implications of the study findings.

Table 3-1. Family Resilience Processes-Family Belief Systems

| Family Resilience Processes | Variable Name | Survey Question Item | Questions | Directionality |
|------------------------------|---------------|----------------------|---|---|
| Family Belief Systems | | | | |
| Positive Outlook | P1EXPECT | P1 PIQ120 | How far in school do you expect (CHILD) to go? Would you say you expect (him/her)... | Higher number indicates more positive outlook |
| | P2NOTGO | P2 PPQ210 | How often during the past week have you felt that you could not get going? | Lower numbers indicate more positive outlook |
| | P2SAD | P2 PPQ200 | How often during the past week have you felt sad? | Lower numbers indicate more positive outlook |
| | P2DEPRES | P2 PPQ140 | How often during the past week have you felt depressed? | Lower numbers indicate more positive outlook |
| | P2FEARFL | P2 PPQ160 | How often during the past week have you felt fearful? | Lower numbers indicate more positive outlook |
| | P2TALKLS | P2 PPQ180 | How often during the past week have you felt that you talked less than usual? | Lower numbers indicate more positive outlook |
| | P2KPMIND | P2 PPQ130 | How often during the past week have you felt that you had trouble keeping your mind on what you were doing? | Lower numbers indicate more positive outlook |
| Transcendence & Spirituality | P2RELIG | P2 HEQ590 | How often does someone in family talk with the child about family's religious beliefs/traditions? | Higher number indicates more Transcendence & Spirituality |
| | P2CULTUR | P2 HEQ600 | How often does some in family participate in special cultural events/traditions? | Higher number indicates more Transcendence & Spirituality |

Table 3-2. Family Resilience Processes-Family Organizational Patterns

| Family Resilience Processes | Variable Name | Question | Questions | Directionality |
|--------------------------------|---------------|--------------|--|----------------------------------|
| Family Organizational Patterns | | | | |
| Connectedness | P1LIK MOM | P1 CFQ010 | Is there any person (other than [yourself/the biological mother/the adoptive mother]) who is like a mother to (CHILD)? | Yes (1) indicates Connectedness |
| | P1CLSGRN | P1 CFQ070 | How many grandparents would you say (CHILD) has a close relationship to? | Higher # indicates connectedness |
| | P1LIKDAD | P1 CFQ030 | Is there any person (other than [yourself/the biological father/the adoptive father] who is like a father to (CHILD)? | Yes (1) indicates Connectedness |
| | P1READBO | P1 HEQ010 | How often do you read to (CHILD)? | Higher # indicates connectedness |
| | P1TELLST | P1 HEQ010 | How often do you tell (CHILD) stories? | Higher # indicates connectedness |
| | P1SINGSO | P1 HEQ010 | How often do you all (household) sing songs? | Higher # indicates connectedness |
| | P1GAMES | P1 HEQ010 | How often you all (household) play Games? | Higher # indicates Connectedness |
| | P1NATURE | P1 HEQ010 | How often you teach (CHILD) about nature? | Higher # indicates connectedness |
| | P1BUILD | P1 HEQ010 | How often you all (Household) build things? | Yes indicates Connectedness |
| | P1SPORT | P1 HEQ010 | How often you all (household) do sports? | Higher # indicates connectedness |
| | P2BKTOG | P2 HEQ500 | # Days Eat Breakfast together? | Higher # indicates connectedness |
| | P2EVENG2 | P2 HEQ500 | # Days Eat Dinner together? | Higher # indicates connectedness |

Table 3-3. Family Resilience Processes-Family Communication

| Family Resilience Processes | Items | Questions | Questions | Directionality |
|-----------------------------|----------|-----------|---|--|
| Family Communication | | | | |
| Open Emotional Expression | P2WARMCL | P2 DWQ010 | Child and I often have warm, close times together | Lower # indicates open, emotional expression |
| | P2CHLIKE | P2 DWQ015 | Most of the time I feel that child likes me and wants to be near me | Lower # indicates open, emotional expression |
| | P2SHOWLV | P2 DWQ025 | Even when I'm in a bad mood, I show child a lot of love | Lower # indicates open, emotional expression |
| | P2EXPRES | P2 DWQ035 | I express affection by hugging, kissing and holding child | Lower # indicates open, emotional expression |
| | P2TOOBUS | P2 DWQ020 | I am usually too busy to joke and play around with child | Higher # indicates open, emotional expression |
| | P2HRDWRM | P2 DWQ030 | By the end of a long day, I find it hard to be warm and loving toward child | Higher # indicates open, emotional expression |
| | P2FEELAN | P2 DWQ060 | I often feel angry with child | Higher # indicates open, emotional expression |
| | P2CHDOES | P2 DWQ045 | Child does things that really bother me | Higher number indicates open emotional expression |
| | P2MEETND | P2 DWQ050 | I find myself giving up more of life to meet child's needs that I ever expected | Higher number indicates open, emotional expression |
| | P2MOREWK | P2 DWQ070 | I find taking care of a young child more work than pleasure | Higher number indicates open, emotional expression |

CHAPTER 4 DATA ANALYSIS AND RESULTS

The purpose of this study was to use a family resilience theoretical perspective to identify three family resilience factors in low-income families that may influence children's academic success. Using the Early Childhood Longitudinal Study-Kindergarten (ECLS-K) database, the relationships among indicators of three family resilience processes (i.e. family belief systems, family organizational patterns, and family communication) and children's school outcomes were examined. It was theorized that the dependent variable (reading achievement) would be impacted by the independent variables (family resilience processes). In addition, the variable (approaches to learning) would mediate the relationships between the independent variables (family resilience processes) and the dependent variable (reading achievement).

Analysis was performed on parental and teacher data including 3,066 kindergarten children who were categorized as living in poverty. The data analytic procedures used in this study are described along with the descriptive statistics for variables of interest. The results of the factor analyses and reliability statistics for the variables of interest are then provided. Finally, the results of the structural equation modeling of the influences of family resilience processes on children's approaches to learning and reading achievement were reported.

Data Analytic Procedures

Data analysis began with the calculation of descriptive statistics to describe demographics of the study sample and comparison of the statistics of the study sample to the total ECLS-K kindergarten 1998-99 cohort sample. Demographic statistics include child's gender, child's age, child's race, parental marital status, family type, number of individuals in household, and language spoke in household.

T-tests were then conducted to analyze the differences between male and female students on reading achievement and children's approaches to learning. In accordance with Enders and Bandalos (2001), problems involving missing data were controlled through the use of models estimating full information maximum likelihood (FIML). The statistical software used for data analysis included SPSS Statistics. Mplus (version 7.11) was used to perform the confirmatory factor analysis and the final step, structural equation modeling (SEM).

Although, structural equation modeling was used to assess the model (Bandalos, 2002; Bollen, 1989) shown in Table 1.1, several essential analyses were conducted prior to this step. First, a confirmatory factor analysis (Schreiber, Stage, Nora & Barlow, 2006) was used to assess the construct validity of the three family resilience constructs a) family beliefs systems, b) family organizational patterns c) and family communication. Reliability estimates were also computed for each of the factor measures (Raykov, 1997). At this point, any indicators that were problematic to the model were dropped and model fit was determined by the use of fit indices (normed fit index, comparative fit index, root mean square error of approximation). Next, a full structural equation model was developed to depict the direct, indirect and overall effects of the hypothesized family resilience processes (i.e. family belief systems, family organizational patterns, and family communication) on reading outcomes. Additionally, the mediating effects of approaches to learning were assessed.

Descriptive Statistics for the Study Variables

Of the 3,066 kindergarten students in the sample, 50.9% were male and 49.1% were female (See Table 4-1). This gender distribution was comparable to the overall population of kindergarten students, which had 51.1% male and 48.8% female. Cultural groups represented in this study's sample included: Black or African American (28%) Hispanic (31%) Asian (6%), Native Hawaiian or Other Pacific Islander (1%), Multi-racial (2%), and Non-Hispanic White

(27%) (See Table 4-2). The overall population of kindergarten students has significantly more Non-Hispanic White students (55%) and less Black (15%) and Hispanic (18%). Other cultural groups for the overall population of kindergarten students were comparable to this study's sample (e.g. Asian, Native Hawaiian or Other Pacific Islander, and multi-racial).

The family type, as indicated in Table 4-3, of the students' sampled included households with 2 parent, plus siblings (38%), 2 parents, no siblings (3%), 1 parent, plus siblings (31%), and 1 parent, no siblings (7%). Table 4-3 shows these findings. In the overall population of kindergarten students there were significantly more two-parent households with siblings (56%) and without siblings (8%) when compared to this study's sample. Furthermore, there were significantly less one-parent households with siblings (13%) and without siblings (6%) when compared to this study's sample.

Thirty-five percent of the kindergarten students sampled had parents who were married at the time of the data collection, 11% had parents who were divorced 1.4% had parents who were widowed, 30% had parents who were never married, and 5% had adoptive parents (5%). In the overall population of kindergarten students in the data set there were significantly more parents who were married (62%) and lower separated (4%), divorced (8%), widowed (0.7%), never married (12%), and non-biological or adoptive parents (2%) when compared to this study's student sample. Table 4-4 highlights these findings.

The average number of individuals living in the household was 5.1 and the mean number of siblings in the household was 2.0 for this study's student sample. These findings are indicated in Table 4-5.

Of this study's sampled kindergarten students, 29% had mothers and 20% had fathers who spoke a language other than English to their child. The overall population of kindergarten

students had lower percentages of languages other than English spoken to their child, with 18% of mothers and 14% of fathers who spoke a language other than English to their child. These results are depicted in Table 4-6.

Gender Differences in Reading Achievement & Approaches to Learning

A series of t-tests were performed to examine differences by gender in student's reading achievement and approaches to learning for the study sample. Statistics surrounding gender differences are shown in Table 4-7. Levene's test for equality of variance in the study sample indicated a significance level of .170. Results of the t-test revealed no significant differences by gender in student reading achievement (p -value = 0.188). Hence Hypothesis 1 was not accepted. However, there were significant gender differences with p -values of 0.01 in children's approaches to learning as reported by parents and by teachers. Levine's test for equality of variance in the study sample indicated a significance level of 1.033 for teacher report and .018 for parent report (See Table 4-8). Thus Hypothesis 2 and Hypothesis 3 were accepted.

Confirmatory Factor Analysis on Family Resilience Processes

Confirmatory factor analyses (CFA) were conducted to identify the best indicators of the predictor variables (i.e. family belief systems, family organizational patterns, and family communication) for the model in this study. It was theorized that the dependent variable (reading achievement) would be impacted by the independent variable (family resilience processes). In addition, the variable, approaches to learning, would mediate both the independent variable (family resilience processes) and the dependent variable (reading achievement). Results for this analysis are as follows:

Interrelationships and Co-variation

A confirmatory factor analysis for family resilience processes was used to examine the extent to which the latent constructs were interrelated. In addition, this analysis served to provide

correlations among the latent constructs. A correlation matrix for each of the three constructs representing family resilience processes are shown in Tables 4-9 through 4-11. Indicators that did not load well were omitted from the model. Two indicator variables, shown in Table 3-1, (P2SAD, P2TALKSLS) were omitted from the family belief systems (positive outlook) construct. Eight indicator variables, shown in Table 3-2, (P1CLSGRN, P1SINGSO, P1GAMES, P1NATURE, P1BUILD, P1SPORT, P2BKTOG, P2EVENG2) were omitted from the family organizational patterns (connectedness) construct. Six indicator variables, shown in Table 3-3, (P2TOOBUS, P2HRDWRM, P2FEELAN, P2CHDOES, P2MEETND, P2MOREWK) were omitted from the family communication (open, emotional expression) construct. The researcher hypothesized a three-factor model to be confirmed in the measurement portion of the model. Revised indicators representing the three factors are reflected in Table 4-12.

Reliability statistics. Cronbach's alpha reliability estimates for the scales comprising the indicators of the three Family Resilience Processes were then computed. These analyses revealed that the initial set of items comprising the scales of transcendence and spirituality (housed under Family Belief Systems) and for social and economic resources (housed under Family Organizational Patterns) did not have adequate reliability. Thus, certain items in these scales were deleted and further reliability estimates were computed with a revised set of items resulting in acceptable Cronbach's Alpha scores for each of the 3 family resilience processes constructs. Family belief systems (positive outlook) had a Cronbach's alpha score of 0.757. Family communication (open, emotional expression) had a Cronbach's alpha score of 0.786. Family organizational patterns (connectedness) had a Cronbach's alpha score of 0.897 (See Table 4-13).

Structural Equation Modeling

Goodness of fit. Analyses to determine the goodness of fit of the proposed model included the Chi-square Test of Model Fit, Root Mean Square Error of Approximation

(RMSEA), Comparative Fit Index (CFI) and the Non-normed Fit Index (TLI). Table 4-14 provides estimation outcomes for these fit indicators. The general rule for acceptable fit for RMSEA is < 0.06 (Schreiber et al, 2006). Results for this study show RMSEA of 0.022, an acceptable fit. CFI (0.998) and TLI (0.976) both showed good fit as they met the ≥ 0.90 criteria (Lei & Wu, 2007). The Chi-square p-value was 0.1211 (with 1 degree of freedom), which is indicative of good model fit.

Results of Regression Analyses

A correlation matrix for the structural equation modeling is provided on Table 4-15.

Student Approaches to Learning and Reading Achievement

Teachers' report of student approaches to learning was found to have a significant relationship to student reading achievement with a p-value of 0.001. Hence, hypothesis four was accepted. Moreover, parents' report of student approaches to learning was found to have a significant relationship to student reading achievement with a p-value of 0.001. Therefore, hypothesis five was accepted. Additionally, parents' report of student approaches to learning was also found to have a significant relationship to teachers' report of student approaches to learning with a p-value of 0.001. Hence, hypothesis six was also accepted. The model summary is shown in Table 4-16.

Family Resilience Processes on Reading

The following were the results of the regression analysis assessing the contribution of the three family resilience processes (i.e. positive outlook, connectedness, and open/emotional expression) to the prediction of children's reading IRT scores. Although positive outlook and open/emotional expression were not significant predictors of reading with p-values of 0.60 and 0.701 respectively, connectedness was a significant predictor of reading with a p-value of 0.001. The estimate for connectedness was -0.045. This estimate requires reverse thinking when

interpreting the results due to how it was scaled (negatively). Thus, a one-unit increase in connection is predictive of a -3.388 point in reading IRT score. Meaning, as disconnection increases, reading scores decrease. Hypothesis seven was partially accepted as only one of the three family resilience processes (connectedness) was found to predict students reading achievement. Table 4-17 Reports these estimates, standard errors and significance values.

Family resilience processes on approaches to learning. The three constructs comprising family resilience processes did not significantly contribute to the prediction of teacher's ratings of students' approaches to learning. Additionally, the family belief systems (positive outlook) factor was not found to be a significant predictor of parent's report of student approaches to learning. However, connectedness and open, emotional expression were found to significantly predict parent's report of their child's approaches to learning, both having p-values of 0.001. Results showed that a one-unit increase in connectedness is predictive of a -0.357 point in parent report of approaches to learning. This variable was negatively scaled; this means that as disconnection increases, parent report of approaches to learning decreases. Results also indicated that a one-unit increase in open, emotional expression is predictive of a -0.237 point in parent report of approaches to learning. This variable was also negatively scaled, thus, results indicate that as low open, emotional expression increases, parent's report of approaches to learning decreases. Hypothesis eight was partially accepted as two out the three family resilience processes contributed significantly to the prediction of the parent's report on their child's approaches to learning. Table 4-18 highlights these findings.

Approaches to learning mediating family resilience processes and reading achievement. When attempting to evaluate the ninth hypothesis exploring the relationship between family resilience processes and reading achievement when mediated by students'

approaches to learning, M Plus output indicated that the data failed to converge. Thus, the error variance was negative (Dillon, Kumar, & Mulani, 1987) and a second order factor analysis was not possible.

Summary

Analysis of the data revealed that the hypothesized model, which provides indicators for family resilience processes, was reliable at the confirmatory factor analysis level and for structural equation modeling. SEM results showed acceptable chi-square, RMSEA, TLI and CFI model fit. Regression analysis of family processes on reading revealed there were significant relationships between reading and the connectedness factor in the family resilience processes model. Regression analysis of family processes on approaches to learning demonstrated that connectedness and open, emotional expression significantly predicted parents' report of student approaches to learning. However, the three family resilience processes were not found to significantly predict teacher's ratings of student approaches to learning. Furthermore, both teacher and parent reports of students' approaches to learning were found to significantly predict children's reading achievement. Moreover, results indicated significant positive association between parent and teacher reports of student's approaches to learning. A summary of the hypotheses and outcomes can be found in Table 4-19.

Table 4-1. Descriptive Statistics: Child gender, child age

| Variables | N | Male | Female |
|--------------------------|-------|-----------------|------------------|
| Child Gender (GENDER) | 3,066 | N=1563 50.9% | N=1,503 49.1% |

Table 4-2. Descriptive Statistics: Child's race (RACE)

| Variables | % Child in Poverty Sample N= 3,066 | % Child Overall Population N= 21, 358 |
|---|--|---|
| Black or African American, Non-Hispanic | 28% | 15.1% |
| Hispanic, Race Specified | 15% | 8.6% |
| Hispanic, Race not Specified | 16% | 9.3% |
| Asian | 6% | 6.4% |
| Native Hawaiian, Other Pacific Islander | 1% | 1.0% |
| More than One Race, Non-Hispanic | 2% | 2.6% |
| White, Non-Hispanic | 27% | 55.1% |

Table 4-3. Descriptive Statistics: Family Type (P1FAMIL)

| Variables | % of Families in Poverty (N= 3,066) | % of Overall Population (N=18,097) |
|-------------------------|---|---------------------------------------|
| 2 Parents Plus Siblings | 38% | 55.7% |
| 2 Parents No Siblings | 3% | 8.1% |
| 1 Parent Plus Siblings | 31% | 13.3% |
| 1 Parent No Sibling | 7% | 5.8% |
| Other | 4% | 1.6% |
| Missing Data | 17% | 15.5% |

Table 4-4. Descriptive Statistics: Responding Parent's Marital Status (P2MARSTA)

| Variables | N | % Poverty Families | % Overall Population |
|------------------------|-------|-----------------------|-------------------------|
| Married | 1,069 | 34.87% | 61.8% |
| Separated | 292 | 9.52% | 4.1% |
| Divorced | 341 | 11.12% | 7.9% |
| Widowed | 44 | 1.44% | 0.7% |
| Never Married | 919 | 29.97% | 11.8% |
| No Bio/Adoptive Parent | 142 | 4.63% | 2.2% |
| Not Ascertained | 4 | 0.13% | 0.1% |
| Missing Data | 255 | 8.3% | 11.4% |

Table 4-5. Descriptive Statistics: Household Total and Number of Siblings in Household

| Variables | Mean of Families in Poverty | N | Mean of Overall Population | N |
|---------------------------------------|-----------------------------|-------|----------------------------|--------|
| Total # in Household (P1HTOTAL) | 5.1 | 3,066 | 4.5 | 18,097 |
| # of Siblings in Household (P1NUMSIB) | 2.0 | 3,066 | 1.46 | 18,097 |

Table 4-6. Descriptive Statistics: Non-English Language Spoken to Child by Parent

| Variables | % Families in Poverty | % Overall Population |
|---------------------------------------|-----------------------|----------------------|
| Mother's Language to Child (P1HMLANG) | | N=18,034 |
| Never Speaks Non-English | 52% | 64.5% |
| Sometimes Speaks Non-English | 6% | 5.7% |
| Often Speaks Non-English | 5% | 3.7% |
| Very Often Speaks Non-English | 18% | 8.8% |
| N/A | 2% | 1.5% |
| Not Ascertained | 1% | 0.3% |
| Missing Data | 17% | 15.5% |
| Father's Language to Child (P1HDLANG) | | N=18035 |
| Never Speaks Non-English | 23% | 52.2% |
| Sometimes Speaks Non-English | 4% | 4.2% |
| Often Speaks Non-English | 4% | 2.8% |
| Very Often Speaks Non-English | 12% | 6.6% |
| N/A | 39% | 18.4% |
| Not Ascertained | 1% | 0.2% |
| Missing Data | 17% | 15.5% |

Table 4-7. Gender Differences in Reading and Approaches to Learning.

| Scales | | N | Mean | Std. Deviation | Std. Error Mean |
|-------------|--------|-------|---------|----------------|-----------------|
| READING IRT | MALE | 1,377 | 23.7172 | 13.90209 | .37464 |
| SCALE SCORE | FEMALE | 1,338 | 24.4213 | 13.93978 | .38109 |
| ATL TEACHER | MALE | 1,430 | 2.6730 | 1.12356 | .02971 |
| SURVEY | FEMALE | 1,392 | 3.0001 | .95146 | .02550 |
| ATL PARENT | MALE | 1,429 | 2.8982 | .93338 | .02469 |
| SURVEY | FEMALE | 1,379 | 3.0456 | .94834 | .02554 |

*ATL=Approaches to Learning

Table 4-8. T-tests: Equality of Variance and Equality of Means (Reading & Approaches to Learning)

| | | Levene's Test for Equality of Variances | | T-test for Equality of Means | | | | | | |
|-------------|------|---|------|------------------------------|----------|-----------------|-----------------|-----------------------|---|---------|
| | | F | Sig. | t | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| READING IRT | EVA | .082 | .774 | -1.318 | 2713 | .188 | -.70411 | .53438 | -1.75195 | .34372 |
| SCALE SCORE | EVNA | | | -1.318 | 2710.319 | .188 | -.70411 | .53440 | -1.75199 | .34376 |
| ATL TEACHER | EVA | 1.033 | .309 | -8.335 | 2820 | .001 | -.32709 | .03924 | -.40404 | -.25015 |
| SURVEY | EVNA | | | -8.354 | 2767.186 | .001 | -.32709 | .03916 | -.40387 | -.25032 |
| ATL PARENT | EVA | .018 | .893 | -4.151 | 2806 | .001 | -.14740 | .03551 | -.21704 | -.07777 |
| SURVEY | EVNA | | | -4.150 | 2798.569 | .001 | -.14740 | .03552 | -.21706 | -.07775 |

*ATL=Approaches to Learning; EVA=Equal Variance Assumed; EVNA=Equal Variance Not Assumed

Table 4-9. Correlation Matrix for Confirmatory Factor Analysis (Family Belief Systems-Positive Outlook)

| Observed Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-------------------|-------|-------|-------|-------|-------|-------|-----|
| 1. P1EXPECT | 1 | --- | --- | --- | --- | --- | --- |
| 2. P2NOTGO | - | 1 | --- | --- | --- | --- | --- |
| 3. P2SAD | 0.127 | | 1 | --- | --- | --- | --- |
| 4. P2DEPRES | -0.60 | .0529 | 0.783 | 1 | --- | --- | --- |
| 5. P2FEARFL | - | 0.525 | 0.546 | 0.504 | 1 | --- | --- |
| 6. P2TALKLS | 0.082 | | 0.558 | 0.546 | 0.471 | 1 | --- |
| 7. P2KPMIND | 0.008 | 0.559 | 0.580 | 0.580 | 0.585 | 0.433 | 1 |
| | - | 0.060 | | | | | |

*M = 0; St. Dev. = 1

Table 4-10. Correlation Matrix for Confirmatory Factor Analysis (Family Organizational Patterns-Connectedness)

| Observed Variable | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|-------------------|--------|--------|--------|-------|--------|--------|--------|-------|-------|-------|-------|-----|
| 8. P1IKMOM | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9. P1CLSGRN | -0.181 | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10. P1LIKDAD | 0.574 | -0.171 | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11. P1READBO | -0.015 | 0.064 | 0.020 | 1 | --- | --- | --- | --- | --- | --- | --- | --- |
| 12. P1TELLST | -0.072 | 0.072 | -0.048 | 0.505 | 1 | --- | --- | --- | --- | --- | --- | --- |
| 13. P1SINGSO | -0.104 | 0.099 | -0.114 | 0.271 | 0.297 | 1 | --- | --- | --- | --- | --- | --- |
| 14. P1GAMES | -0.078 | 0.049 | -0.075 | 0.251 | 0.310 | 0.332 | 1 | --- | --- | --- | --- | --- |
| 15. P1NATURE | -0.026 | 0.090 | -0.080 | 0.270 | 0.326 | 0.329 | 0.328 | 1 | --- | --- | --- | --- |
| 16. P1BUILD | -0.024 | 0.091 | -0.015 | 0.287 | 0.280 | 0.263 | 0.334 | 0.308 | 1 | --- | --- | --- |
| 17. P1SPORT | -0.103 | 0.110 | -0.114 | 0.228 | 0.264 | 0.320 | 0.376 | 0.311 | 0.308 | 1 | --- | --- |
| 18. P2BKTOG | 0.015 | 0.026 | 0.012 | 0.111 | 0.076 | 0.059 | 0.063 | 0.071 | 0.066 | 0.084 | 1 | --- |
| 19. P2EVENG2 | 0.021 | -0.013 | 0.028 | 0.30 | -0.172 | -0.150 | -0.082 | 0.063 | 0.047 | 0.054 | 0.186 | 1 |

*M = 0; St. Dev. = 1

Table 4-11. Correlation Matrix for Confirmatory Factor Analysis (Family Communication-Open, Emotional Expression)

| Observed Variable | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
|-------------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-----|
| 20. P2WARMCL | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 P2CHLIKE | 0.627 | 1 | --- | --- | --- | --- | --- | --- | --- | --- |
| 22. P2SHOWLV | 0.385 | 0.423 | 1 | --- | --- | --- | --- | --- | --- | --- |
| 23. P2EXPRES | 0.467 | 0.452 | 0.432 | 1 | --- | --- | --- | --- | --- | --- |
| 24. P2TOOBUS | -0.212 | -0.152 | -0.272 | -0.346 | 1 | --- | --- | --- | --- | --- |
| 25. P2HRDWRM | -0.175 | -0.156 | -0.255 | -0.286 | 0.515 | 1 | --- | --- | --- | --- |
| 26. P2FEELAN | -0.176 | -0.156 | -0.173 | -0.101 | 0.282 | 0.318 | 1 | --- | --- | --- |
| 27. P2CHDOES | -0.182 | -0.117 | -0.109 | -0.019 | 0.275 | 0.251 | 0.498 | 1 | --- | --- |
| 28. P2MEETND | 0.025 | 0.066 | 0.073 | 0.097 | 0.169 | 0.228 | 0.294 | 0.407 | 1 | --- |
| 29. P2MOREWK | -0.167 | -0.115 | -0.115 | -0.158 | 0.277 | 0.333 | 0.348 | 0.352 | 0.379 | 1 |

*M = 0; St. Dev. = 1

Table 4-12. SEM: Factors and Variables in Family Resilience Processes Model

| Factor | Observed Variable | Item Questions | Directionality |
|---|-------------------|---|-----------------------------------|
| Factor 1: Family Belief Systems (Positive Outlook) | 1.P1EXPECT | How far in school do you expect (CHILD) to go? | Positive estimate indicates P.O. |
| | 2. P2NOTGO | Would you say you expect (him/her)... | |
| | 3.P2DEPRES | How often during the past week have you felt that you could not get going? | |
| | 4.P2FEARFL | How often during the past week have you felt depressed? | |
| | 5.P2KPMIND | How often during the past week have you felt that you had trouble keeping your mind on what you were doing? | |
| Factor 2: Family Organizational Patterns (Connectedness) | 6. P1LIK MOM | Is there any person (other than [yourself/the biological mother/the adoptive mother]) who is like a mother to (CHILD)? | Negative estimate indicates conn. |
| | 7. P1LIK DAD | Is there any person (other than [yourself/ the biological father/the adoptive father]) who is like a father to (CHILD)? | |
| | 8. P1READBO | How often do you read to (CHILD)? | |
| | 9. P1TELLST | How often do you tell (CHILD) stories? | |
| Factor 3: Family Communication (Open, Emotional Expression) | 10. P2WARMCL | Child and I often have warm, close times together | Negative estimate indicates OOE |
| | 11. P2CHLIKE | Most of the time I feel that child likes me and wants to be near me | |
| | 12. P2SHOWLV | Even when I'm in a bad mood, I show child a lot of love | |
| | 13. P2EXPRES | I express affection by hugging, kissing and holding child | |

*P.O. = Positive Outlook, Con. = Connectedness, OOE = Open, Emotional Expression

Table 4-13. Reliability Statistics: Family Resilience Processes

| Family Resilience Processes | Subcategory | Cronbach's Alpha Score |
|--------------------------------|---------------------------|------------------------|
| Family Belief Systems | | |
| | Positive Outlook | 0.757 |
| Family Communication | | |
| | Open Emotional Expression | 0.786 |
| Family Organizational Patterns | | |
| | Connectedness | 0.897 |

Table 4-14. Factor Regression: Tests of Model Fit

| Index | |
|--------------------|-----------------------------------|
| Chi-square P-value | 0.1211 (with 1 degree of freedom) |
| RMSEA | 0.022 |
| CFI | 0.998 |
| TLI | 0.976 |

Table 4-15. Correlation Matrix for SEM (Family Resilience Processes)

| Observed Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-----|
| Factor 1 | | | | | | | | | | | | | |
| 1.P1EXPECT | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2. P2NOTGO | -0.127 | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3.P2DEPRES | -0.082 | 0.525 | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4.P2FEARFL | 0.008 | 0.427 | 0.504 | 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5.P2KPMIND | -0.058 | 0.462 | 0.492 | 0.346 | 1 | --- | --- | --- | --- | --- | --- | --- | --- |
| Factor 2 | | | | | | | | | | | | | |
| 6. P1LIK MOM | -0.019 | -0.067 | 0.007 | 0.011 | -0.054 | 1 | --- | --- | --- | --- | --- | --- | --- |
| 7. P1LIK DAD | 0.060 | -0.078 | -0.065 | -0.002 | -0.069 | 0.574 | 1 | --- | --- | --- | --- | --- | --- |
| 8. P1READBO | 0.103 | -0.038 | -0.097 | -0.070 | -0.005 | -0.015 | 0.020 | 1 | --- | --- | --- | --- | --- |
| 9. P1TELLST | 0.120 | -0.074 | -0.081 | -0.038 | -0.019 | -0.072 | -0.048 | 0.505 | 1 | --- | --- | --- | --- |
| Factor 3 | | | | | | | | | | | | | |
| 10. P2WARMCL | -0.148 | 0.151 | 0.119 | 0.061 | 0.121 | 0.090 | 0.031 | -0.159 | -0.172 | 1 | --- | --- | --- |
| 11. P2CHLIKE | -0.164 | 0.021 | 0.074 | 0.056 | 0.071 | 0.090 | 0.122 | -0.136 | -0.179 | 0.627 | 1 | --- | --- |
| 12. P2SHOWLV | -0.101 | 0.114 | 0.144 | 0.104 | 0.089 | 0.078 | 0.089 | -0.113 | -0.171 | 0.385 | 0.423 | 1 | --- |
| 13. P2EXPRES | -0.068 | -0.006 | 0.055 | 0.008 | 0.005 | 0.172 | 0.203 | -0.130 | -0.127 | 0.467 | 0.452 | 0.432 | 1 |

Table 4-16. Factor Regressions: Approaches to Learning and Reading

| Predictor | Outcome | Estimate | S.E. | Ext./S.E. | Two-tailed P-value |
|------------------------|----------------|----------|-------|-----------|--------------------|
| Approaches to Learning | | | | | |
| Teacher Report | Reading | 1.519 | 0.102 | 14.951 | 0.001 |
| Parent Report | Reading | 0.437 | 0.070 | 6.241 | 0.001 |
| | Teacher Report | 0.077 | 0.007 | 10.766 | 0.001 |

*Pos. Outlook = Positive Outlook; Open, Emo. Expr. = Open Emotional Expression

Table 4-17. Factor Regression: Family Resilience Processes on Reading

| | Estimate | S.E. | Ext./S.E. | Two-Tailed P-Value |
|---------------------|----------|-------|-----------|--------------------|
| Reading IRT Score | | | | |
| Pos. Outlook | 1.888 | 1.344 | 1.405 | 0.160 |
| Connectedness | -3.388 | 0.984 | -3.445 | 0.001 |
| Open, Emo. Expr. | -0.117 | 0.306 | -0.384 | 0.701 |

*Pos. Outlook = Positive Outlook; Open, Emo. Expr. = Open Emotional Expression

Table 4-18. Factor Regressions: Family Resilience Processes on Approaches to Learning

| Approaches to Learning | Family Resilience Processes | Estimate | S.E. | Ext./S.E. | Two-tailed P-value |
|------------------------|-----------------------------|----------|-------|-----------|--------------------|
| Teacher Report | Pos. Outlook | 0.284 | 0.136 | 2.094 | 0.036 |
| | Connectedness | -0.042 | 0.101 | -0.417 | 0.677 |
| | Open, Emo. Expr. | -0.042 | 0.030 | -1.384 | 0.166 |
| Parent Report | Pos. Outlook | 0.110 | 0.091 | 1.208 | 0.227 |
| | Connectedness | -0.357 | 0.070 | -5.129 | 0.001 |
| | Open, Emo. Expr. | -0.236 | 0.020 | -11.557 | 0.001 |

*Pos. Outlook = Positive Outlook; Open, Emo. Expr. = Open Emotional Expression

Table 4-19. Hypotheses Testing

| Hypothesis | Outcome |
|--|--|
| H1. There is a significant difference by student gender in children's reading achievement. | No significance |
| H2. There is a significant difference by student gender in parent's report of student approaches to learning. | Significance |
| H3. There is a significant difference by student gender in teacher's report of student approaches to learning. | Significance |
| H4. There is a significant relationship between teachers' report of student approaches to learning and student reading achievement. | No significance |
| H5. There is a significant relationship between parents' report of student approaches to learning and student reading achievement. | Significance |
| H6. There is a significant relationship between parents' report of student approaches to learning and teachers' report of student approaches to learning. | Significance |
| H7. There is a significant contribution of family resilience processes to the prediction of student reading achievement. | |
| Family belief systems (positive outlook) | No significance |
| Family organizational patterns (connectedness) | Significance |
| Family communication (open, emotional expression) | No significance |
| H8. There is a significant contribution of family resilience processes to the prediction of student approaches to learning. | |
| Family belief systems (positive outlook) | PR-no significance TR-no significance |
| Family organizational patterns (connectedness) | PR-significance TR-no significance |
| Family communication (open, emotional expression) | PR-significance TR-no significance |
| H9. There is a significant effect of students' approaches to learning in mediating the relationships between family resilience processes and reading achievement. | Unable to determine |

*PR=Parent Report; TR=Teacher Report

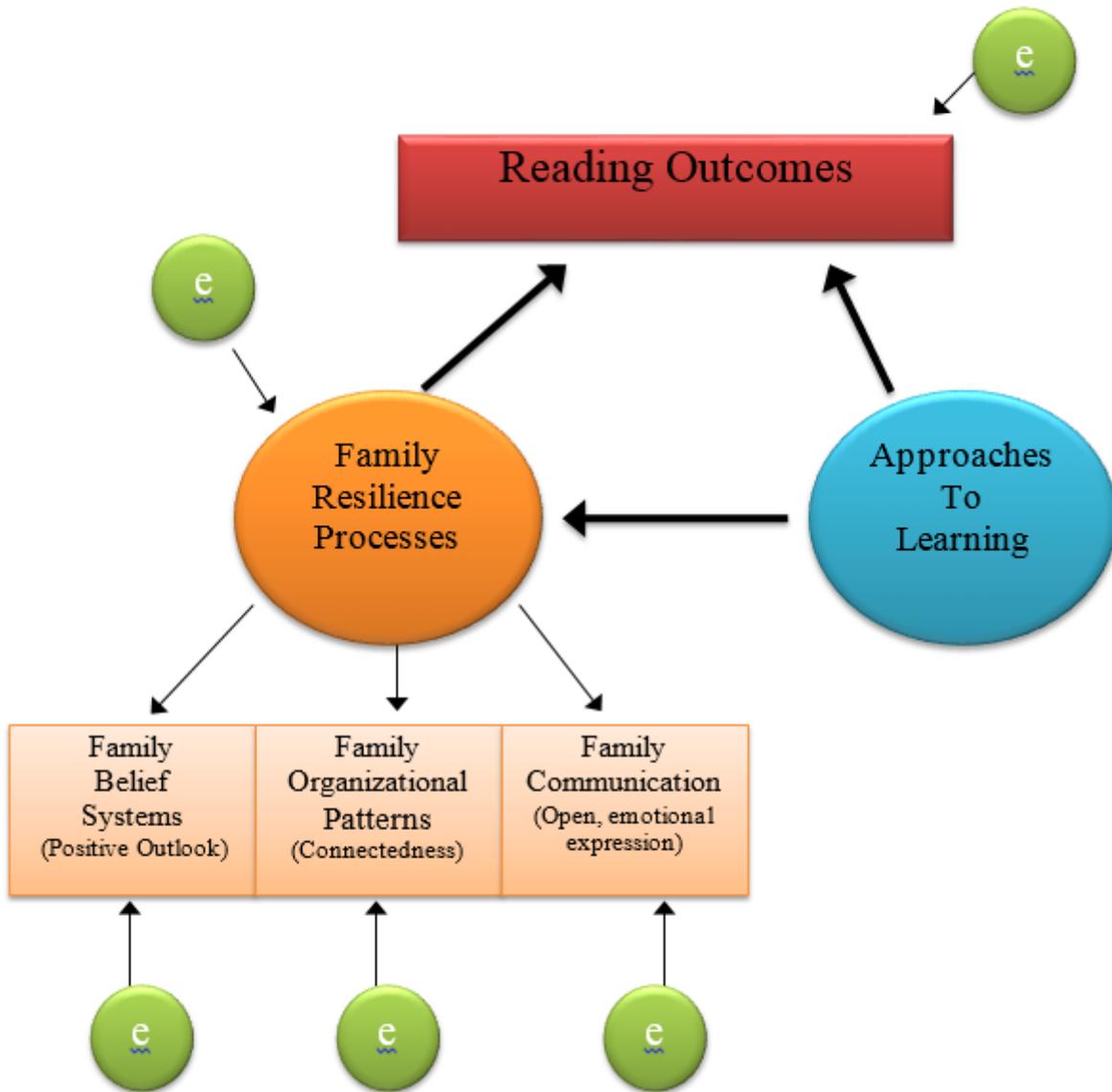


Figure 4-1. Structural equation model with fit modifications. *Bold face errors indicate structural component. e = error.

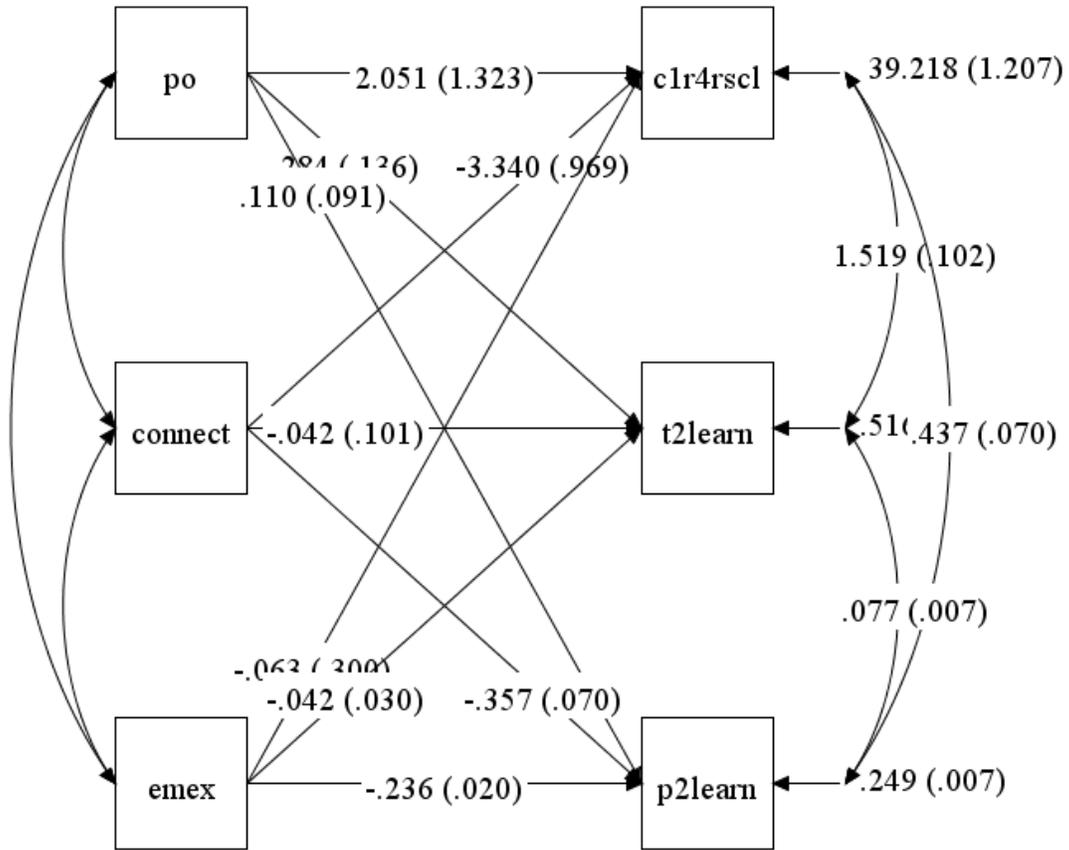


Figure 4-2. Factor Regressions. Estimate and standard error included

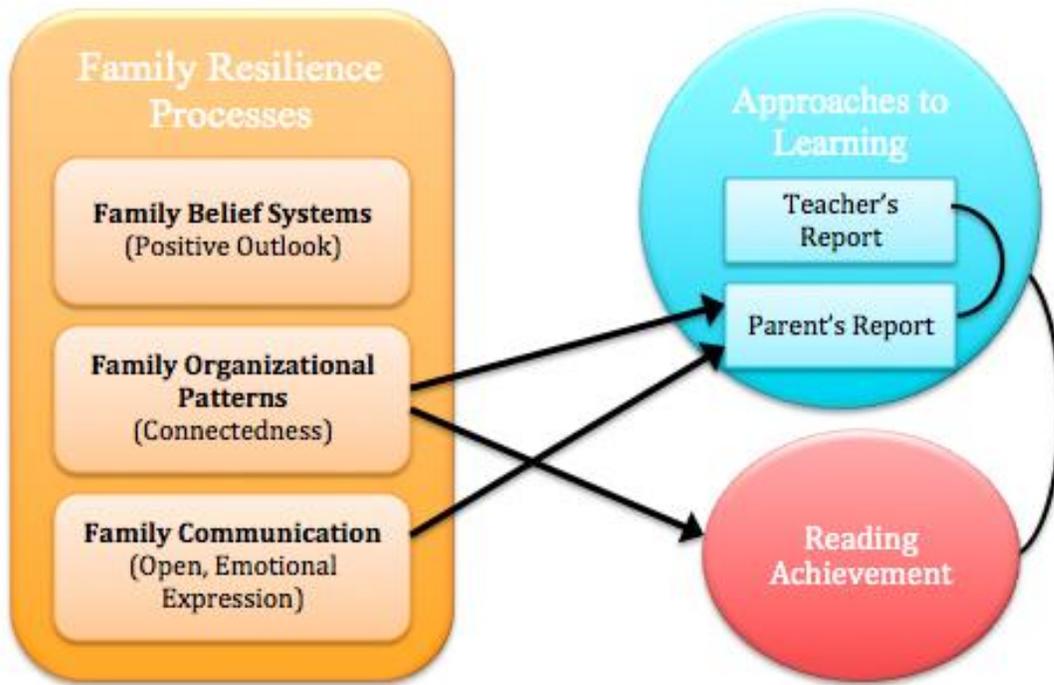


Figure 4-3. Outcome Summary.

CHAPTER 5 DISCUSSION

The purpose of the current study was to examine the influence of three family resilience processes influence on low-income kindergarten children's academic achievement. It was hoped that the findings from this study could further contribute to conversations related to the experience of children in marginalized and at-risk family circumstances. This study theorized that resilience processes demonstrated by families of children in poverty might explain why certain children do well in school despite the disadvantages they face. This chapter provides a discussion of the findings regarding the demographic characteristics of this sample of kindergarten students as compared to the total ECLS-K kindergarten sample. Differences by gender will also be discussed. Finally, the findings concerning the contribution of family resilience processes to the prediction of students' reading outcomes and approaches to learning will be discussed. Additionally, limitations of the study are addressed. Finally, implications for practice, theory, and research are discussed.

Demographic Characteristics

Initial analysis of demographics of the study sample demonstrates both similarities and differences when compared to the overall population of kindergarten students in the ECLS-K data set. Compared to the findings of Zill and West (2001) who examined the total ECLS-K study sample of kindergarten students, the following disparities were significant. There were more Black and Hispanic students and less White students compared to the overall population of kindergarten students in the total ECLS-K sample. This study sample had fewer students living in two parent households compared to the overall population of kindergarten students. There were more students living with separated, divorced, widowed, or never married parents as compared to the overall ECLS-K population of kindergarten students. This study's sample of

children also had a greater proportion of children being raised by non-biological or adoptive parents. The average total number of individuals in the household for this study's population of students (5.1) was slightly higher when compared to the overall population (4.5). Furthermore, the average number of siblings in the household was slightly higher for this study's population of students in poverty. Finally, students in poverty had a higher proportion of parents that spoke a language other than English in the household.

Gender Differences in Reading Achievement and Approaches to Learning

In this study it was hypothesized that there would be differences by gender in reading achievement and students' approaches to learning in low-income students. The first hypothesis of this study tested whether there were gender differences in reading achievement. This hypothesis was not accepted because findings revealed that there were no gender differences in reading achievement in this study sample. Gender differences have been reported in previous studies. The findings in this study with regard to gender and reading achievement are inconsistent with the findings of the overall ECLS-K kindergarten student population reported by Zill and West (2001). These researchers reported that girls perform slightly higher than boys compared when looking at the proportion of students who are one or two proficiency levels ahead of the average student. Specifically, more girls than boys were able to associate letters with sounds at the beginning and ending of words and 70% of girls know their letters compared to 62% of boys. In the current study, similar findings about gender differences were expected. One possible explanation of the inconsistency in results may be that girls in more economically advantaged living situations are provided with more opportunities for reading coaching than are girls coming from families in poverty.

Both parent and teacher ratings of students' approaches to learning were assessed to determine if there were differences by gender. Results from this study revealed significant

differences by gender in parents' and teachers' ratings of children's approaches to learning, with females rated as demonstrating positive approaches to learning than their male counterparts. Thus, the second and third hypotheses were accepted. This is consistent with findings by Zill and West (2001) who reported that 78% of girls show eagerness to learn compared to 71% of boys, 74% of girls pay attention well compared to 58% of boys, and 78% of girls continually complete assigned tasks compared to 65% of boys.

Approaches to Learning and Reading Achievement

The fourth hypothesis was accepted as a significant relationship between teachers report of student approaches to learning and reading achievement was found. Furthermore, findings revealed a significant relationship between parent's report of student approaches to learning and reading achievement. Thus, the fifth hypothesis was accepted. Additionally, the sixth hypothesis was accepted as the proposed relationship between teacher and parent reports of student approaches to learning to reading was found to be significant.

To date, research comparing teacher's reports of students' approaches to learning to parent's reports are scarce. The Social Skills Rating Scales (SSRS) is a measure that explores has typically been utilized to explore teacher's appraisal of students' approaches to learning (Elliott, Gresham, & McCloskey, 1988). However, in one study by Ruffallo and Elliott (1997), researchers utilized item analysis protocol (IAP) to look for correlations among parent and teacher ratings of SSRS. Findings revealed greater differences between mothers' and fathers' responses than among parent and teacher responses. One explanation for these findings may be that parents and teachers both can play very important yet different roles in children's lives and each (i.e. mothers, fathers, and teachers) can offer varied information as a result of observing children in different settings.

Family Resilience Processes Predicting Reading Achievement

Regression analysis of family resilience processes on reading revealed there were no significant relationships between reading achievement and family belief systems (positive outlook) or family communication (open, emotional expression). There were, however, significant relationships between reading achievement and the connectedness factor in the family resilience processes model. These results are partially consistent with the expectations of this study, however, it was hoped that all family resilience processes would significantly predict reading achievement. Thus, the seventh hypothesis was partially accepted.

For this study, operationalization of these factors was influenced by previous studies measuring parental factors within the ECLS-K data set (Bodovski & Youn, 2010). However, this study differed from previous studies by utilizing a strength-based approach to conceptualize family factors. Possible reasons why positive outlook and open, emotional expression were not found to have a significant effect on children's school outcomes may be because the question items for these factors did not fully capture the nuances involved these types of positive family dynamics, as they strayed from parent-centered to family-centered effects.

This study's results are partially consistent with the literature in that one of the family resilience processes, connectedness, was found to predict children's reading achievement. For the purposes of this study connectedness was operationalized through items that captured not only extended family relationships (i.e. people who have relationships with the child that resemble parental roles) but also interactions promoting connection (e.g. frequency with which parents read or tell stories to the child). Researchers have reported positive associations between quality family interactions and children's language skills (Brooks-Gunn & Markman, 2005). The literature indicates that early parent-child interactions (prior to kindergarten) are strong predictors of low-income children's literacy development (Dodici, Draper, & Peterson, 2003).

Kainz and Vernon-Feagons (2007), in their study on the ECLS-K data set, reported family characteristics as strong predictors of low-income children's initial reading skills at the kindergarten level. In addition, home literacy experiences such as reading to children and/or telling children stories have been linked to early literacy skill development (Dodici, et al, 2003) that promotes later school success.

Family Resilience Processes Predicting Approaches to Learning

Of the three family resilience processes, connectedness and open, emotional expression were shown to contribute to the prediction of parent's report of approaches to learning. However, no significant relationship was found in family belief systems (positive outlook) predicting parents' report of student approaches to learning. Furthermore, none of the three family resilience processes significantly contributed to the prediction of teacher's reports of children's approaches to learning.

These findings are partially consistent with the expectations of this study. It was hoped, however, that all family resilience processes would significantly predict both parent and teacher reports of children's approaches to learning (i.e. persistence at tasks, eagerness to learn, attentiveness, learning independence, flexibility, and organization). Hence, the eighth hypothesis was partially accepted.

There is a scarcity of research exploring differences among parental and teacher perceptions of young children's approaches to learning. Researchers have studied family factors--parental nurturance, discipline, teaching, nurturance (Brooks-Gunn & Markman, 2005) as well as maternal emotional distress and parenting styles (Linver & Brooks-Gunn, 2002)--associated with young children's development from the perspective of parents. Furthermore, findings from research conducted by Whitaker, Graham, Severtson, Furr-Holden, & Latimer, 2011) demonstrated that urban youth's (age 11-16) motivation for learning was strongly influenced by

factors associated with family functioning reported by parents. This may account for the lack of consistency between the findings of this study in which teacher reports of children's approaches to learning were not associated with family resilience processes.

Mediating Effect of Children's Approaches to Learning

The ninth hypothesis proposed a significant relationship between family resilience processes and reading achievement when mediated by students' approaches to learning. However, results indicated no convergence, so a second order regression analysis was not possible. Reasons for this, as described by Dillon, et al. (1987), are termed Heywood cases—where results show negative or near zero variance estimates and are connected to identification problems, outliers, sampling fluctuations or model misspecifications. In this study, it is theorized that failure to converge was a result of unforeseen measurement error or missing links in the model.

Study Limitations

There were several limitations inherent in this study. First, due to utilizing a post hoc data set, the researcher did not have an influence over the choice of questions and instruments used. Although review of the literature and consultation were utilized to include indicators that connected to family resilience processes, the researcher was limited to only using the items provided in the ECLS-K data. Consequently, there is a deficit-based tone to some of the item questions connected to positive outlook--or one of the subsets of the family belief systems resilience processes. For instance, item PPQ200 asks parents "How often during the past week have you felt sad?" and is used to indicate positive outlook. It was theorized that lower scores for this indicator would suggest the absence of evidence of this deficit-based measure and in fact the ECLS-K data analytics categorize this and many of the other indicators used for positive outlook under *parental well-being*. Ideally, the researcher would want to construct items that are

consistent with the strength-based theoretical lens used. However, in efforts to utilize a large, nationally representative sample of students required to perform structural equation modeling, this drawback was necessary. As indicated in the implications for future researcher, studies exploring family resilience processes in which researchers develop their own survey questions would benefit from use of strength-based language.

A second limitation was that the data for the ECLS-K kindergarten class was collected in 1998. This can be seen as a limitation due to shifts in education policy and practices over the last decade. The real time effects of those shifts cannot be seen with this particular study. However, because the study was meant to provide a baseline measure that may be utilized in future studies, it can still provide insight into factors that affect kindergarten students' educational success. For instance, this data can be compared longitudinally with remaining data collected for the ECLS-K (i.e. 1st grade, 3rd grade, 5th grade, and 8th grade) or it can be used as a baseline to compare to newer data from the ECLS-K study (i.e. kindergarten class of 2011-2012).

Another limitation concerned the voluntary nature of participants utilized in the study. For example, participants may not accurately reflect the poorest families living in poverty. Although, the ECLS-K researchers implemented adequate sampling procedures, families in poverty that may not have basic resources (i.e. phone) may not have been represented in the sample. Also, because many of the survey questions assessed the child-parent relationships—a topic that can be very personal and may lead to participants providing answers that are not an accurate reflection of their parent-child interactions, the respondents might seek to present themselves in a more socially desirable light in completing the parent interview, and thus might not accurately represent their family processes.

Implications

Findings from Zill and West (2001) when compared to the findings of this study allude to the need to continue exploring which of a family's positive factors influence children's school success. For instance, these researchers reported that some kindergarten students who come from adverse living circumstances have been shown to demonstrate advanced levels of school achievement. In their research, Zill and West (2001) provided a portrait of American children during the first year of elementary school and describe variations in knowledge, skills and behaviors across groups of children and found that one child in 20 kindergarten children who come from families with high-risk characteristics (i.e. mother has not completed high school, families on welfare, single-parent households, parents with English as a second language) perform two proficiency levels ahead of the typical American kindergartener in reading and one level ahead in math. Furthermore, these researchers reported that one in a hundred kindergarteners coming from a disadvantaged family demonstrated advanced levels in reading or math skills upon entering kindergarten.

Implications for Research

This study provides a snapshot of what families of kindergarteners' in poverty look like in the U.S. with regard to family structure, configuration, ethnicity, etc. in 1998. This information can be compared to more recent demographic data for kindergarten students in the U.S. Findings from this study can contribute to the foundational knowledge with which researchers build conceptualizations about young school-aged children in poverty. For instance, gender differences found in this study connected to reading outcomes and children's approaches to learning provide new and validating evidence, respectively, to previous research studies.

To date, there are few studies that explore unique family factors of children in poverty that help propel them forward. Although, this study expected to find more significance with

regard to multiple family resilience factors influencing school outcomes, the results still demonstrated relationships between connectedness and reading achievement. The findings of this study attest to the efficacy in utilizing family connectedness as a predictor variable when exploring reading achievement. Also, the relationship found in the study between two family resilience processes (connectedness and open, emotional expression) and parent's report of student approaches to learning provides rationale for researchers to consider these variables when looking at children's school outcomes.

Implications for Practice

The results of this study have implications for school administrators, teachers, and clinicians. For example, the findings support the need for schools, personnel, and teachers to promote family resilience processes such as connectedness and positive outlook. Zill and West (2001) offer, "schools may be maintaining (or even diminishing) advantages that their pupil had when entering school" (p. 1). Utilizing resilience-based approaches when understanding and working with children in poverty and with other marginalized populations can combat the potential for this to occur.

Findings from this study indicate that school strategies aimed at promoting both family connectedness and open, emotional expression can assist in fostering academic achievement in young children living in poverty. This is consistent with researchers such as Snow and Beals (2006) who argue that family interactions at mealtimes can "contribute to children's linguistic and cognitive development in ways that support their learning to read and write" (p. 51). Given that these practices promote family connectedness and are tied to literacy development, rationale for exploring how school interactions with families can motivate this type of positive, literacy promoting dynamic.

Additionally, clinicians can benefit from the findings in this study to enhance their knowledge in working with families who have young children. Family interventions that focus on aspects of family resilience may be useful in fostering successful school outcomes for at-risk children such as those living in poverty. Teacher preparation programs may utilize these findings to better equip teachers-in-training with knowledge about family resilience processes. Collaborative family-school practices have been found useful when working with low-income and other marginalized families (Amatea, et al, 2013). Teacher education programs can further enhance collaborative family-school intervention strategies by incorporating family resilience framework to determine and promote family strengths.

Implications for Theory

This study utilized a family resilience theoretical framework proposed by Walsh (2012). The findings of this study suggest that utilizing strength-based research frameworks when researching children's educational outcomes can be instrumental in starting to identify what works well in low-income families to promote school success. Furthermore, theories connected to children's learning may be influenced by the strength-based nature of the study, specifically related to the examination of family resilience processes influencing child outcomes. Although, resilience-based theories have been utilized in various other fields (i.e. family therapy, nursing, etc.) in conceptualizing the experiences of those they serve, the education field has not typically used this lens when viewing children and families. Thus, the education field may benefit from altering their conceptualizations of children's experiences within the family context to include a more strength-based, holistic lens.

Recommendation for Future Research

Skill development in early childhood is strongly related to children's later academic success (Dodici, et al., 2003). Thus, a growing awareness of predictive factors contributing to

academic achievement in kindergarten sheds light onto protective factors that promote academic achievement throughout children's school career. The relationship between early academic skills and later school performance provide rationale for studies exploring factors that positively contribute to academic success (Dodici, et al., 2003). Furthermore, as low-income school children continue to face adverse circumstances that provide barriers for school success, a strong rationale for exploration of positive family factors in low-income families that combat negative effects on school achievement becomes evident.

The findings of this study serve as a baseline for future research on family resilience factors that influence children's school outcomes. The results of this study suggest the need for further understanding of how family resilience processes affect children's school outcome. The family resilience processes model constructed for this study could be used in future research studies involving ECLS-K data to determine influence on children's math achievement outcomes as well as behavioral outcomes in school (i.e. externalizing and internalizing). Furthermore, studies utilizing other large databases can serve to expand the understanding of family resilience processes that may influence children's educational and emotional development.

Furthermore, the inconsistency between the gender differences in the overall population of kindergarteners reading achievement and the lack of gender differences in reading for the children in poverty explored in this study shed light onto the need to further explore what accounts for these disparities. Future research studies could also utilize the existing "non-poverty" variable in the ECLS-K 1998-99 kindergarten cohort data as a comparative sample to obtain model estimates. Although utilizing replication with multiple samples was beyond the scope of this study, future replication with other marginalized populations (i.e. minority children, children with English as a second language, etc.) would be beneficial in demonstrating stability

of results for this particular study and can provide insight into linkages, for instance, between certain languages spoken in the home and reading achievement.

Conclusion

This study utilized a family resilience theoretical framework to create and test a model of family resilience processes to that might influence kindergarten students' school outcomes. The use of this theory is representative of new ways to conceptualize the experiences that families in poverty go through a strength-based lens. Such a lens might allow educators to view various aspects of family life that potentially effect children's school success in a positive way. In this study, family belief systems, family connectedness, and family organizational patterns were hypothesized to influence positive outcomes of children's reading ability and approaches to learning. Findings demonstrated that connectedness and open, emotional expression significantly predicted parents' report of student approaches to learning. However, the three family resilience processes were not found to significantly predict teacher's ratings of student approaches to learning. Furthermore, both teacher and parent reports of students' approaches to learning were found to have a significant relationship to reading achievement. Additionally, results indicated a significant relationship between parent and teacher reports of student's approaches to learning. Although the initial measures (i.e. confirmatory factor analysis, reliability, fit indexes) showed promise for the model measuring the influence of family resilience processes on reading with children's approaches to learning mediating this relationship, the final analysis revealed need for model adjustment. Findings suggest implications for research, theory and practice inclusive of implementation of a strength-based, family resilience theoretical perspective when studying children's school outcomes.

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BIOGRAPHICAL SKETCH

Kacy A. Mixon was born in Winter Haven, Florida. Before pursuing graduate studies, she completed her B.A. in sociology at the University of Florida in 2005. Kacy graduated in 2007 with her M.S. in marriage and family therapy from Valdosta State University. Kacy has also studied psychotherapy in the Czech Republic, an experience that shaped her understanding of societal resilience. Following her studies in Valdosta, GA, she worked as a staff therapist providing intensive in-home therapy services in the Broward County area in South Florida, an area full of diverse cultural/ethnic and religious client backgrounds. Kacy worked collaboratively with community mental health agencies, Department of Juvenile Justice, Department of Children and Families, and the family courts to assist and provide clients with family therapy services in the areas of sexual abuse, rape, divorce, marital counseling, parenting, child behavioral dilemmas, suicide/suicidal ideation, grief/loss, depression, child abuse, self- injury, family transitions, foster care/adoption transitions, domestic violence. One of 3 therapists in region to work with the national SAFESTART grant which focused on preventing effects of violence on children. Kacy's experience helping clients navigate through confusing court systems, assisting with mandated court requests, and connecting clients to community resources led to her interest in exploring and utilizing existing family strengths in treatment as a way to mitigate adversity experienced by her clients.

She is a currently a licensed marriage and family therapist working with the Military Families Learning Network providing the latest research, continuing education, and training opportunities related to family strengthening as well as prevention and treatment of family violence for professionals working with military families. She also works as an adjunct instructor and clinical supervisor to marriage and family therapists in training at Valdosta State University. She teaches, practices and supervises utilizing a strength-based, family resilience framework.

She received her Ph.D. in counselor education and supervision with a marriage and family counseling concentration from the University of Florida in the fall of 2013. Kacy actively researches, teaches, publishes, and presents on family-school partnerships, counselor wellness, military family experiences and the assessment and treatment of family violence. She also has led workshops on creativity in counseling.

Kacy's has instructed teachers in training about effective practices in engaging families and community involvement in schools with diverse family populations, which has significantly shaped her research lens. Additionally, the experience of being a licensed marriage and family therapist has shaped her views of families struggling with adverse circumstances in that she has seen first-hand resilient factors assisting in families' achievement of goals and discovering strengths necessary to overcome hardship. Furthermore, Kacy was struck by current literature that neglected to use a strength-based orientation when studying low-income families. These deficit-oriented approaches to research seemed to contradict the experiences Kacy saw first-hand when working with low income and other marginalized families.

Kacy's choice of utilizing the ECLS-K data stemmed from conversations with colleagues about their work with post hoc databases. Furthermore, Kacy has been a member of a research team that utilizes the ECLS-K database and structural equation modeling. This approach to data analysis was also convenient and gave her opportunity to gain even more experience working with large post hoc data sets.