

FAMILY BACKGROUND: A PREDICTOR OF COMPREHENSION DIFFICULTY
IN THE ELEMENTARY GRADES

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Dissertation under the direction of Professor Donald L. Compton

This study examines how family background impacts the comprehension of struggling readers in grades 2-6. Background surveys were administered to parents ($N = 51$), who also completed cognitive and psychosocial measures. These data, in conjunction with student cognitive and behavioral scores, were used to examine the predictive validity of the family background instrument compared to two socioeconomic measures common to educational research (i.e., Lunch Subsidy, Hollingshead). Correlation and regression analyses examined how the variables composing family background correlate and their relationship to the students' comprehension score on the Gates MacGinitie Reading Test. Components of family background were significantly related to students' comprehension scores; and accounted for as much or more variability than either the Hollingshead or lunch subsidy status.

Approved _____ Date _____

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By

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Dissertation

Submitted to the Faculty of the
Graduate School of Vanderbilt University
in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Special Education

December, 2007

Nashville, Tennessee

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ACKNOWLEDGEMENTS

Thanks to the many faculty, staff, and students at Peabody College of Vanderbilt University who encouraged, supported, and facilitated my professional development and the completion of the doctoral degree. Special thanks to my doctoral committee members, Drs. Donald Compton, Doug Fuchs, Lynn Fuchs, and Mark Berends, for their guidance and support. I would especially like to express gratitude towards my chair, Don Compton, for allowing and encouraging me to pursue my interest and generously providing the time and resources for me to do so; and Doug Fuchs for his advisement through both the master and doctoral programs. I'd also like to acknowledge Dr. David Lubinski, though not an official committee member, he has been immensely supportive.

In addition, I want to express my heartfelt appreciation for my friends, Alicia Bonaparte, Eban Walters, Amy Elleman, and Paul Morphy, who have provided invaluable support—serving as soundboards, cheerleaders, editors, and at times couriers. Last, but certainly not least, I must acknowledge my family for being my biggest supporters, always believing in and providing every opportunity for me. Thanks for all you have done to encourage and facilitate my achievements.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	v
LIST OF FIGURES	vi
Chapter	
I. INTRODUCTION	1
Theoretical Framework	7
Purpose of Study	10
Research Hypotheses	11
Significance of Study	12
II. LITERATURE REVIEW	15
Reading Development	16
Reading Comprehension and Social Risk	17
Family Background and Reading Comprehension	19
III. METHODOLOGY	33
IV. ANALYSIS AND RESULTS	45
Correlations	45
Multiple Regression Models	50
Model Efficiency	57
V. CONCLUSIONS	62
Appendix	
A. INTERVIEW MONITORING FORM	69
B. SAMPLE QUESTIONS FROM THE WONDERLIC	70
C. FAMILY RESOURCE SURVEY	71
D. FAMILY BACKGROUND SURVEY (PARENT INTERVIEW FORM)	78

E.	MAPPING OF ITEMS BY FAMILY BACKGROUND CONSTRUCT	106
F.	DESCRIPTION OF COMPUTATION PROCEDURES FOR CAPITAL INDEXES (FULL MODEL).....	108
G.	DESCRIPTION OF COMPUTATION PROCEDURES FOR CAPITAL INDEXES (RESIVED MODEL).....	110
	REFERENCES	111

LIST OF TABLES

Table	Page
1. Descriptive Characteristics of Participants and their Children.....	34
2. Descriptive Details of Pilot Sample.....	43
3. Zero Order Correlations between Reading Comprehension and Capital Indexes	47
4. Partial Correlations between Reading Comprehension and Capital Indexes Controlling for Grade and Recruitment Site.....	48
5. Summary of Regression Statistics for Family Background Variables Predicting Student’s Reading Comprehension Performance.....	51
6. Regression Analyses Testing Social Capital as a Mediator between Human and Financial Capital and Student’s Comprehension Performance.....	53
7. Regression Statistics for Family Background and Other Commonly Used Measures of Socioeconomic Status on Reading Comprehension.....	55
8. Varimax Rotated Component Matrix based on Principal Component Analysis of Revised Capital Constructs.....	58
9. Post-hoc Regression Analyses Predicting Student’s Comprehension Performance based on Revised Family Background Variables.....	59

LIST OF FIGURES

Figure	Page
1. Distribution of reading comprehension scores across levels of total capital	54
2. Plot of revised family background sub-indexes using varimax rotation.....	57

CHAPTER I

INTRODUCTION

The ability to understand and gain knowledge from text is vital for success in school and everyday life. As students progress through school, the amount of text they are required to read independently and extract information from increases. Those students experiencing comprehension difficulties are placed at a serious disadvantage because they are less able to process much of the information presented to them. The 2005 Nation's Report Card reports that only 31% of U.S. fourth graders are considered to be proficient readers, and 30% lack the basic reading skills required to complete grade level tasks (National Center for Educational Statistics, NCES, 2005). Far too often children who are having reading difficulties in the elementary grades continue to struggle throughout their academic careers (Lee & Burkam, 2002; Snow, 2002).

Discussion regarding what variables are effective in predicting outcomes in reading has been on-going on for several decades, but the reauthorization of legislations such as the Individuals with Disabilities Education Act (2004) and the Elementary and Secondary Education Act (2002), frequently referred to as No Child Left Behind (NCLB), have placed the need for effective predictive measures and interventions at the forefront of the educational research agenda. Given the importance of reading, one of the goals of the new IDEA legislation is to identify struggling readers and intervene as soon as possible (Anonymous, 2004). NCLB has also focused on screening all elementary-

aged children for reading difficulties and implementing empirically based interventions for those at-risk.

There has been mounting evidence that early intervention can prevent reading difficulties in many children (Schatschneider, Fletcher, Francis, Carlson, & Foorman, 2004). However, we must be able to accurately identify those students in need of intervention. Scarborough (1998) reported that while students' scores on reading measures tend to be temporally stable, considerable variability in reading achievement exists beyond what prior performance can account for. Elbro and Scarborough (in press) also note that 25-69% of students identified as at risk never develop reading difficulties and up to 9% of those who are not identified as at risk display reading problems. This suggests there is still work to be done in regards to developing efficient measures for identifying those at risk. Numerous instruments have been examined to determine their effectiveness in identifying students at risk for failure, most being cognitive and linguistic in nature. While skill such as, IQ, phonemic awareness, and word reading skills have proven to be accurate predictors of future reading comprehension performance (Cain, Oakhill, & Bryant, 2004; Plaza & Cohen, 2003; Swanson & Alexander, 1997), other non-cognitive factors such as attention/behavior ratings, motivation, and socioeconomic status (SES) have also shown to be valid predictors of future reading ability (Hart & Risley, 1995; Jencks & Phillips, 1998; Lee & Burkam, 2002; Torgesen, 2000).

Socioeconomic Status as a Predictor

It has been asserted for years in the social sciences that parental SES levels affect student achievement, but it remains unclear how and to what magnitude (Coleman et al.,

1966; Jeynes, 2002; Sirin, 2005). Given the impact of SES on achievement has been discussed in the social sciences research for several decades, and that SES has been proposed as the “most widely used contextual variable in education research” (Sirin, 2005, p. 417) it is surprising that few guidelines for the examination and report of this variable exists. Research evaluating the validity of current measures of SES, and focus on the conceptualization and development of a valid and reliable measure of SES is needed (Oakes & Rossi, 2003). While SES is not a causal factor in itself, increasing our understanding of this construct and its relations to reading performance may help unveil the social factors involved in reading comprehension ability and guide in the development of more intensive interventions, and identification of those in need of them.

Low family income is one of several factors considered to place students at risk for reading difficulty. Hiebert & Kamil (2005) report 55% of those qualifying for a lunch subsidy based on income level rated as below basic in reading, where as only 24% of those without a lunch subsidy fell into this category. Lack of access to resources (e.g., texts for reading or time for conversation) is suspected to play a role in this discrepancy (Burgess, 1997; Levy, Gong, Hessels, Evans, & Jared, 2006). Hundreds of millions of dollars are spent on educational programming targeting children in poverty such as, Title or Chapter 1 programs in attempts to level the playing field, with questionable results (Borman, D’Agostino, Wong, & Hedges, 1998; McDill & Natriello, 1998). In order to better intervene and decrease the risk of reading failure for students of low SES we need to better understand what factors of SES contribute to reading difficulty.

What is Socioeconomic Status?

SES is a variable that has been widely used in educational research, yet its relationship with achievement is still unclear. Both Sirin's (2005) and White's (1982) meta-analytic review report a moderate, mean correlation between SES and achievement— .29 and .35, respectively. However, both meta-analyses note that studies have found the relationship between these variables to range from having no significant relation to a strong correlation. One explanation for the wide discrepancy is the lack of consensus with regards to how best to conceptualize and measure SES (Bornstein & Bradley, 2003; Oakes & Rossi, 2003; White, 1982). There are many definitions of SES. For example, Hauser and Warren (1997) state that SES is a shorthand expression for variables (e.g., income, educational attainment, occupational standing) that serve to characterize a person's, family's, household's, or other aggregate's placement in regards to their capacity to generate or consume goods that are valued by our society. Others such as Krieger, Willains, and Moss (1997) extend this concept of goods generation and consumptions to include a notion of prestige and status based on access to goods, knowledge, and services afforded given one's position in socially ranked hierarchies. Frequently measures of SES (e.g., Hollingshead or Duncan's Socioeconomic Index) rely heavily on one's education level and attempt to apply a prestige score to ones occupation. There are also broader definitions of SES such as the one presented by Oakes and Rossi (2003). These authors define SES as "differential access (realized and potential) to desired resources" (p. 775); a definition that does not place emphasis on any one SES variable or make a conceptual distinction between prestige or status and material goods.

White's (1982) review found that over 70 different variables employed individually or in combination, were used as indicators of SES. While there are a variety of conceptualizations of SES, three major indicators have garnered the widest acceptance: parental income, education, and occupation (Bornstein, Hahn, Suwalsky, & Haynes, 2003; Hauser, 1994; Jeynes, 2002; & Sirin, 2005).

Income. According to Sirin (2005), parent income is an indicator of SES that reflects a family's potential for providing economic and social resources to a child. It is frequently assumed that SES is a rather static family characteristic, yet Duncan and Magnuson (in press) report that income and family circumstances can be volatile and variations in the effect of SES occur based on the stage of development in which economic and family conditions are experienced. Specifically, events that occur early in childhood have the greatest impact on achievement particularly in children whose families would be classified as low income (Duncan, Yeung, Brooks-Gunn, & Smith, 1998). This finding cautions against the frequent use of a one point in time measure of SES.

Education. While family income is considered to be somewhat volatile, parent level of education is considered a more stable aspect of SES, which also reflects the potential resources available to a child given its strong correlation with income level in the United States (Sirin, 2005). However, Mueller and Parcel (1981) warn against the use of income or education as reliable proxies for SES given the tendency for there to be considerable variation in education and income levels within each educational ranking. The authors also note that within occupational categories income is very heterogeneous.

Given these factors, Mueller and Parcel advocate for the use of occupational status as a proxy of SES.

Occupation. Occupation is an abstract grouping used to classify jobs that are similar in nature (Hauser & Warren, 1997). Measures of occupation generally incorporate some measure of prestige based on the regard given to that career in the culture of the individual's society. Cirino, Chin, Sevcik, Wolf, Lovett, and Morris (2002) argue that occupation is a better measure of SES than education. An individual's occupation tends to be temporally stable and significantly correlated with other social and economic variables such as, income and educational levels. In addition, one's occupation can provide information regarding the social and technical skills of the individual, as well as their current and future economic prospects. Another benefit of occupation as a measure of family SES is that respondents are more willing to provide information regarding their occupation than their income and they are more likely to know this information for other members of their household/family (Hauser & Warren, 1997). Despite these benefits, there are issues regarding the measurement of occupations. Specifically, many of the composite occupational measures are obsolete and lack criterion validity.

While there are apparent limitations with the use of each of these SES indicators, there is significant scientific and theoretical support for the examination of these and other social indicators, which will be discussed later in this report.

Additional SES Indicators

In addition to the three primary indicators, many studies also incorporate measures of home resource into their definition of SES. Home resources refer to the

possessions and activities available in the home (e.g., computers, books, and other educational materials), as well as having a physical space to work and access to other educational activities (e.g., after school and summer courses or outings). Sirin's (2005) found that measures involving home resources had the strongest correlation $r = .51$ with academic achievement, compared to traditional measures of SES ($r = .28-.30$). White (1982) also found that measures of home atmosphere accounted for between 4 and 11 times more achievement variation than traditional SES measures, but cautioned against the use of this variable due to issues of directionality and possible third variables. Despite this warning, recent studies have continued to accept the inclusion of measures of home environment and resources in the conceptualization of SES.

Theoretical Framework

A variety of economic and social theories support the impact of home environment on academic performance. Some theories focus on the impact of resources on individual outcomes (e.g., Family Resource Model, Model of Human Investment), while others address how norms and behaviors are transmitted (e.g., socialization and role model perspective). The Family Resource Model and Becker & Tomes (1986) Model of Human Investment propose that the amount, timing, and nature of resources allocated to child effects attainment; while the socialization and role model perspectives assert that parents or older siblings transmit patterns of behavior. Other theories such as, Bronfenbrenner's Ecological Systems Theory and Coleman's Model of Family Background, focus on both the resources available to individuals or family units and how these resources are transmitted (Havenman & Wolfe, 1995).

Bronfenbrenner's Ecological Systems Theory (a.k.a. "bioecological systems theory") holds that in order to understand a child's development it is necessary to consider not only the individual, but their environment also. Bronfenbrenner's theory suggests that one's environment is composed of a complex system of relationships which are organized in layers nested within each other. One's development is influenced by the relations within and between each of these layers, as well as by the larger society in which these relations occur. The first or inner most layer of an individual's environment is the microsystem. Microsystem refers to the interactions and relations between the individual and members of their immediate environment (i.e., family, neighborhood, and school). The next layer, the mesosystem, serves to connect settings within the microsystem (e.g., home and school, neighborhood and church). Bronfenbrenner (1979) posits that the connections between settings can be as important to development as the settings themselves. That is, one's ability to read can be affected as much by the ties between home and school as by the nature of instruction received.

Though the child generally does not have direct contact with the third layer of their environment, the exosystem, they still are affected by it. The exosystem involves social structures that the child is not directly involved, but that have a direct impact on the child's environment such as the parental workplace or local school district; both of which can have an effect on the nature of the relationships the child has. For example, a parent's work schedule can limit the child's exposure to that parent; and a school district's decisions can determine the type of instructional procedures and activities the child is involved in (Bronfenbrenner, 1979).

There are two other components of one's environment, the macrosystem and chronosystem. The macrosystem houses the norms and values of the individual's surroundings; and the chronosystem deals with the timing of events (e.g., the child's physiological changes, the death of a parent; societal economic crisis) in the environment (Bronfenbrenner, 1986; Paquette & Ryan, 2001). In sum, Bronfenbrenner calls for an examination of human development which incorporates the process by which the individual relates with the environment, the individual's characteristics (i.e., their cognitive, biological, and behavioral repertoire), the context (characterized in the aforementioned layers), and consideration of the temporal dimensions that affect change over the life span (Lerner, 2005).

While Bronfenbrenner's Ecological Systems Theory presents a framework for the organization of relations and their influence, what Coleman would refer to as social capital, Coleman's theory focuses on the idea that that there are multiple forms of resources or 'capital' that serve to make achievement of certain ends possible, that would not be in its absence. Coleman employed the term family background to describe the sum of these capitals.

Family background consists of three components: financial, human, and social capital (Coleman, 1988). Financial capital refers to a family's income or wealth, and speaks to the physical resources a family can provide to assist in development and achievement. Human capital is generally measured using parental education and refers to the provision of tacit knowledge, social competence, and a cognitive environment that promotes a child's learning. Social capital refers to approximated resources, such as time and individuals, available for support and intellectual tasks; as well as social norms and

values (Coleman, 1988). Coleman's model of family background serves as an expansion on the traditional measures of SES in that it incorporates a family's social relations, but unlike Bronfenbrenner's Ecological Systems Theory it includes a broader examination of the physical and educational resources available to the individual or family. As with SES, there is significant empirical data suggesting that family background may serve as an early predictor of student academic performance, attainment, and response to instruction (Berliner, 2005; Foorman et al., 1997, Hofferth, Boisjoly, & Duncan, 1998; Mercy & Steelman, 1982; Petrill, Deater-Deckard, Schatschneider, & Davis, 2005; Snow, Barnes, Chandler, Goodman, & Hemphill, 1991; Torgesen et al., 1999). Both Bronfenbrenner's and Coleman's theories are influential in the development of this study. While Coleman's Family Background conceptualization is most heavily relied on, Bronfenbrenner's focus of timing of events (specifically at the microsystem level) is incorporated within the examination of capital.

Purpose of Study

The purpose of this study is to assess the family background of students in grades 2-6, who were screened for participation in a research-based reading intervention, and how background impacts their performance on the comprehension subtest of the Gates-MacGinitie Reading Test. The questions this study attempts to answer are: a) How does family background and its components (i.e., social, human, and financial capital) relate to student's reading comprehension? b) Does one's social capital mediate the relations between human and financial capital? c) Does the relation between family background and reading comprehension vary by level of total capital? d) Is family background more

predictive of reading comprehension ability than traditional socioeconomic measures, specifically the Hollingshead (Hollingshead, 1975) and lunch subsidy status? and e) what does the examination of family background add to the prediction of reading comprehension ability above traditional cognitive and linguistic measures (e.g., IQ and phonological awareness)? Answers to these questions may provide a more refined tool for socioeconomic categorization and identifying those students most at-risk prior to formal reading instruction.

Research Hypotheses

It is hypothesized that the children of participants with less capital will score lower on the reading comprehension measure. It is also hypothesized that:

- Human Capital will be a better predictor of reading comprehension skill than financial or social capital. Although it is assumed that both financial and social capital will relate to student's comprehension ability, it is suspected that measures of the literacy and educational experiences of the students and others in their environment (i.e., members of their household and other close relatives) will have the strongest relationship.
- Social Capital (specifically, the strength and quality of social networks) will mediate the effect of financial capital. Social capital may have a larger impact for those with lower levels of financial and human capital. That is, the negative effects of having limited amounts of financial and/or human capital may be tapered in the presence of strong social supports, and norms/values that encourage educational development. For example, a parent who has little income or

education, but is very involved in his/her child's school may be able to counteract their individual capital limitations by building supportive relationships for themselves and the student at the school, as well as possibly being exposed to knowledge regarding how to work to build their child's skills away from the schoolhouse.

- Family background will be more predictive than traditional SES measures because it serves to capture a more precise picture of the family's social situation.
- Family background will account for a significant amount of variability beyond what is accounted for by the child's cognitive and linguistic ability.

Significance of Study

While numerous studies have considered components of family background as factors predicting academic achievement, few have attempted to examine all components of family background or to investigate their relations to the reading comprehension performance of struggling readers in the elementary grades. This study also adds to the existing research by including an examination of intergenerational influence, controlling for parent general cognitive and reading ability, and by measuring social status at multiple periods in the child's development (e.g., birth, entry into first grade, and current status).

In order to examine the comprehension ability of elementary students who are moving beyond Chall's initial reading stage (Chall, 1983), this study focuses on students in grades 2-6. The goal is to examine the performance of students during a stage in which they are expected to be reading to learn, rather than learning to read. In addition, the

assessment of reading comprehension ability can be quite difficult prior to second grade since formal reading instruction is still in the early stages.

In sum, this study attempts to: 1) broaden the examination of possible predictors/moderators of reading comprehension performance; 2) identify a more predictive model for SES categorization than those commonly used; 3) examine whether social predictors of reading comprehension vary by levels of capital; 4) consider family background across the child's life span, rather than at just one point in time; 5) obtain a proxy of, and control for, genetic contribution and intergenerational familial influences on reading performance; and 6) evaluate the importance of examining variables beyond the traditional cognitive and linguistic measures typically used to predict reading performance and instructional response.

With 60-70% of variance in achievement attributable to the individual it is important to consider the effect of factors outside of the schoolhouse, since school factors represent only 30-40% of the variance (see Scheerens & Bosker, 1997). Greater specificity in the identification of those background factors which predict comprehension difficulty may allow for both the development and improvement of interventions involving families of struggling readers. Given the long-term impact of reading failure, it is imperative that we accurately locate those students needing assistance as early as possible and provide them with appropriate intervention.

The current chapter presents an introduction to and statement regarding the purpose and necessity of this study, as well as provides theoretical support for this research. Chapter 2 reviews the background literature relative to the role of family background's affect on the reading comprehension ability of students in grades 2-6. A

description of the sample, measures and procedures employed in this study are provided in Chapter 3. Chapter 4 presents the results of analyses of families' capital on the reading comprehension performance of struggling readers, as well as the interactions among and predictability of the various forms of capital. Finally, a summary of the results and discussion regarding the study's findings, implications, limitations, and recommendations for practice and future research are addressed in Chapter 5.

CHAPTER II

LITERATURE REVIEW

Introduction

Learning to read takes place within a social context. Theorists such as Dewey and Vygotsky were the first to raise awareness of the role of social interaction in literacy development. Since this early work, it has been well founded and accepted that literacy is developed through social interactions and is representative of how information is interpreted and transmitted by a specified community or cultural group. Research shows that some of the variability in reading ability can be attributed to differences in children's sociocultural environments (Hart & Risley, 1995; Jencks & Phillips, 1998; Lee & Burkam, 2002; Snow, 2002; Snow et al., 1991).

Despite such evidence, questions regarding the efficiency of examining social factors linger, in tandem with arguments that they contribute little to the models predicting reading ability and are also hard to change (Connor, Morrison, & Petrella, 2004; Elbro & Scarborough, in press). For example, Elbro and Scarborough (in press) state that compared to children's linguistic capabilities, socio-cultural factors have not been found to strongly correlate with reading achievement ($r < .25$); yet, even the authors note a significant correlation ($r = .21$) between home literacy environment and reading development. According to Lipsey and Wilson (2001), correlation effect sizes of $r \leq .1$ are considered to be small, those of approximately $r = .25-.39$ as medium, and correlations of $r \geq .40$ are large.

Although variability in reading performance has been largely attributed to individual characteristics (Scheerens & Bosker, 1997), we cannot simply ignore socio-cultural factors. Difficult to remediate does not mean impossible. It simply means that researchers, practitioners, and society members at-large have more work to do when it comes to helping children develop adequate reading comprehension ability. The RAND Reading Study Group (RRSG) notes that for there to be universal reading comprehension success the education community needs to fully understand how communicative practices vary across socio-cultural groups and that reading comprehension involves cognitive, linguistic, and cultural attributes. The RRSG also reports that one's socio-cultural experiences may differentially affect the interpretation of the reading task, and that resulting interpretations may clash with literacy definitions rooted in the larger school-based culture (Snow, 2002).

Reading Development

Variability in reading comprehension ability can be attributed to many factors such as assessments used, instruction provided, and characteristics of the reader. However, Snow (2002) states that the primary source of variability in the elementary years is individual differences in word-level ability. The simple view of reading posits that reading comprehension is composed of word recognition and listening comprehension (Gough, 1996). Catts, Hogan, Adlof, and Barth (2003) report that the over time these components vary in their relative influence on reading comprehension. That is, as students progress between grades 2 and 8 the influence of word recognition decreases and the significance of listening comprehension increases. Although fluent

word recognition is important to reading comprehension, it does not guarantee reading comprehension proficiency. Other determinants of reading comprehension skill include one's linguistic and vocabulary knowledge, motivation and engagement, discourse and domain knowledge, understanding of the reading task, cognitive and metacognitive skill, and other cognitive capabilities (e.g., working memory, reasoning, inferencing). Students who are exposed to quality beginning reading instruction and demonstrate the ability to quickly and accurately read words have a strong foundation for reading comprehension growth (Snow, 2002).

The RRSB defines *reading comprehension* as “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (p. 11). This process involves three interrelated components—the reader, the text, and the activity or purpose for reading. The construction of meaning requires active monitoring and strategy application to ensure the text is understood. That is, strong comprehenders read purposefully and actively monitor whether they are meeting their designated purpose and if what they are reading is clear and congruent with their background knowledge. They also employ strategies to enhance the clarity, organization, and retention of the information presented (e.g., rereading, summarization) (Snow, 2002). Poor comprehenders, on the other hand, have difficulty engaging these strategies spontaneously (Baker & Anderson, 1982; Yuill & Oakhill, 1991).

Reading Comprehension and Social Risk

As with learning in general, reading comprehension is impacted by the larger sociocultural context. Research has shown that students' literacy activities and motivation

are enhanced by social interactions within their environments (Snow, 2002). Children exposed to relatively richer literacy-building environments are more likely to become successful readers. The achievement gap between African- and European Americans can be partly explained by between-group differences in SES and family background characteristics (Jencks & Phillips, 1998; Orr, 2003; Snow, 2002). Snow et al. (1991) report that parents' income and education levels are highly correlated with achievement, more so than classroom and school level factors. Moreover, Sirin's (2005) meta-analytic review of the relationship between SES and academic achievement of students in grades K-12 found a medium to strong relation between these variables, with an overall mean effect size of .29. Lindo (2007) reports similar results (i.e., overall $M = .25, p \leq .01$) regarding the relationship between SES and silent reading comprehension performance for students in grades 2-6. Unfortunately, African American and Hispanic students from low socioeconomic backgrounds are prone to have poorer phonemic awareness than their low income, European American peers (Juel, 1988). These phonological difficulties hinder these groups development of decoding ability, thereby affecting reading comprehension.

Juel (1988) found that 88% of students who were poor readers in grade 1 remained poor readers in grade 4 and continued to display decoding deficits. Also of concern are research findings which show that students who are considered to be reading on level in grade 3 do not necessarily go on to develop adequate comprehension skills in the later grades, a phenomena frequently referred to as the fourth grade slump (Snow, 2002). In addition, the difference in quantity of print exposure between good and poor readers has been shown to grow as students age (Juel, 1988). These findings certainly

paint a disturbing picture, and they emphasize the need and importance of understanding how to intervene with these populations.

It would be helpful to understand why some students judged to be at greater risk for problematic literacy development never display reading difficulties, while others struggle throughout their lives. It has been posed by several researchers (see Burchinal, Roberts, Zeisel, Hennon, & Hooper, 2006; Masten, Best, & Garmezy, 1990; Rutter, 1979) that developmental outcomes are influenced by the number of risk factors an individual is exposed to as well as his or her individual response to these risk, a line of theoretical reasoning referred to as the *multiple risk model*. This model is supported by findings from the Early Childhood Longitudinal Study (ECLS) show that children from families with multiple risk factors (e.g., poverty, low maternal education, ethnic minority status, maternal depression) enter kindergarten performing below those who are not exposed to these factors; and they continue to lag behind throughout their schooling (Burchinal et al., 2006). Despite this trend, many children in circumstances that would place them at risk succeed in school (Garmezy, 1993). Burchinal et al. (2006) assert protective factors exist which serve to weaken risk factors' negative effects. Further study of the features of children's social environments may provide better understanding of which factors afford success in children despite an individual's risks.

Family Background and Reading Comprehension

An examination of the features of students' family backgrounds may help identify both risk and protective factors. Coleman's conceptualization of family background affords the investigation of a broad array of variables that may place a student at-risk. Not

only does his conceptualization call for the consideration of families' financial resources, but it also takes into account the educational and social resources available within the family and in their larger social environment. The RRSB states that many of the factors that inhibit readers' learning, such as the nature of materials read or beliefs regarding the act of reading, are sociocultural in nature and vary as a function of background variables (e.g., community and cultural membership, economic resources, and family choices) (Snow, 2002).

Patterson, Kupersmidt, & Vaden (1990) report that students' academic achievement (reading, math, and language composites) during grades 2-4 was significantly predicted by income level, ethnicity, gender, and household composition, which together explained 25% of the variance in student achievement. That is, children from low income families, those of African American descent, males, and those living in single parent households tend to score lower on achievement measures. Then again, Duncan and Magnuson's (2005) SES composite (i.e., number of children's books in the home, age child entered kindergarten, child's birth weight, age of mother at time of birth, and whether mother received welfare assistance) accounted for much of math and all of the reading test-score gap between African- and European American students. Other authors such as Jencks and Phillips (1998) and Snow et al. (1991) report similar findings. While these and other studies examine the variables that comprise family background, few studies focus on these variables' effects on elementary-aged students' reading comprehension performance. The following provides a review of the various constructs used to assess family background and their relationship with the reading comprehension skills of U.S. students in grades 2-6.

Financial Capital

One of the most common delineators of social class is the amount of economic resources available to a family or individual, which is measured by variables such as parental income, wealth, poverty level, and/or employment status.

Income. Income refers to the monies derived from labor or capital (Merriam-Webster, 2001). Patterson et al. (1990) report that income levels significantly predict student academic achievement ($r = .39$). Snow et al. (1991) also found family income to be correlated with reading comprehension across grades levels ($r = .36$), as did Roscigno (2000; $r = .28$).

Poverty. Poverty is a measure related to income. It is frequently examined as a threshold which factors in a family's income and the number of people who are supported by that income; but other predetermined, income-based criteria may also be applied (e.g., Medicaid or lunch subsidy status). Schultz (1993) notes a significant correlation between reading comprehension and socioeconomic advantage (i.e., whether child qualifies for lunch subsidy) for students in grades 4-6, while Roscigno (2000) and Goddard (2001) report significant albeit, negative correlations ($r = -.28$ and $-.31$, respectively) between receipt of lunch subsidy and comprehension. Conversely, Rauh, Parker, Garfinkel, Perry, and Andrews (2003) did not find poverty (measured by Medicaid status) to be a significant predictor of reading ability in third grade. However, Lucas (1998) examined the impact of the number of years families spent in poverty, and found that each year in poverty reduced a student's expected rate of comprehension growth by .01 points each month ($p < .001$) after controlling for race, gender and maternal cognitive skill. The

discrepancy in results among these studies may be due to the timing of the assessment of poverty, the means by which poverty was measured, or the reading assessment employed. Duncan and Magnuson (in press) note that the earlier in childhood poverty occurs the more detrimental its effect is on development.

Wealth. A family's wealth, the value of their total assets minus their total debt, has also been found to predict reading skill. Wealth is positively correlated with income, but it represents a more stable measure of financial resources (Duncan & Magnuson, in press). Due to its relative stability, some have argued that wealth is a better measure of financial capital than income and poverty are because it provides a more accurate measure of the opportunities accessible to the family (Conley, 1999; Corwyn, 2004; Mayer, 1997; Oliver & Shapiro, 1995; 2001). Orr (2003) argues that wealth impacts children's achievement because it determines the amount of cultural capital to which they are exposed. Unfortunately, wealth is rarely used to assess SES in educational research, and no studies considering its relation to reading comprehension were located.

Employment. Parental employment status serves as a proxy of family receipt of financial resources. Vandell and Ramanan (1992) found that the employment status of mothers' of students in grades K-2 significantly added to the prediction of second graders' reading achievement scores (i.e., $R^2 \Delta$ from .33 to .35; $b = .20$) after other background factors (i.e., student- age, race, poverty level, home environment; and maternal-cognitive score, marital status, esteem, values, and employment status prior to students kindergarten year) were controlled for. However, Parcel, Nickoll, and Dufur (1996) suggest that parents' employment conditions may impede the level of social capital available to their children. The effect of maternal employment has, in fact, been

found to vary according to the complexity of the mother's jobs. Specifically, non-employment in the first year of a child's life had a positive effect only for the children of mothers working in low complexity jobs, while there was actually a negative effect when mothers' work involved highly complex tasks (Parcel and Menaghan, 1994). These authors also note that overtime hours worked, whether by mother or father, had a negative effect on their child's verbal abilities. Parcel and Menaghan propose that this effect is due to the lack of time available to interact with child. On the other hand, it is suspected that a parent's difficulty maintaining full time employment may also have a negative effect, given the stress or depression that may be induced (Parcel et al, 1996).

Human Capital

In assessing capital, social scientists are not merely interested in one's employment status, but also in the type of work that is done by members of the household. This is because one's occupation provides information about his/her social and technical skills, personality traits, experiences, and economic prospects (Cirino et al., 2002); all of which help determine one's human capital.

Occupation. Although parental occupation is frequently cited as a proxy for social status, no studies were identified that independently investigated its relationship with reading comprehension in the targeted grade range. Parcel and Menaghan (1994) did note however, that mothers' whose occupation involved more complex cognitive skills better encouraged their children's cognitive development; and Flowers, Meyer, Lovato, Wood, & Felton (2001) examined the difference between normal and poor readers and found

that socioeconomic status, measured by parental education level and occupation, was higher ($p < .001$) for normal readers.

Several other studies have included parental occupation in SES composites that include parental education level and assign prestige values or rankings to certain job categories, such as the Hollingshead. In Mason, Stewart, Peterman, and Dunning's (1992) study parent education and occupation did not predict grade 3 reading comprehension. A similar outcome is reported in Scarborough's (1998) sample of second graders. However, Hecht, Burgess, Torgesen, Wagner, and Rashotte (2000) did find a large correlation ($r = .44, p < .05$) between grade 4 reading comprehension scores and the Hollingshead measure. In addition, broader reading achievement measures, which include reading comprehension items, have also reported significant relations ranging from .27-.34 with these measures of socioeconomic status (Carlson et al., 1999; Molfese, Modglin, & Molfese, 2003).

Education. Another variable generally used to assess human capital is parental education. Roscigno (2000) found that parent education correlated ($r = .33, p < .05$) with student reading comprehension in grades 1-8. Guthrie, Schafer, and Huang (2001) and Snow et al. (1991) report similar results when examining the reading comprehension skills of students in grade 4 ($r = .21$ and $-.66$, respectively). Gill (1997) also notes a significant correlation between parent education and reading comprehension in grade 6 ($r = .18$), yet Snow et al. (1991) did not find this relationship in grades 2 or 6 ($r = .03$ and $r = .12$). The small sample ($N = 32$; 11 second graders, 12 fourth graders, and 9 sixth graders) employed by Snow et al. may explain the variation in their outcomes. Though , Poe, Burchinal, and Roberts' (2004) investigation of the relation between mother's

education and grade 2 reading achievement (including comprehension) in a sample of African American students also reported a correlation which was not significant ($r = .25$). On the other hand, Rauh, et al. (2003) report that having a mother with less than a high school education resulted in a significant drop (1.86 points) in student's reading percentile. While there is research suggesting a significant relationship between parental education and reading comprehension, that nature of that relationship has been shown to vary based on the sample and measures employed (Lindo, 2007; Sirin, 2005)

It is not only parent education that accounts for the human capital available to students. Children's own childcare and educational experiences add to their human capital. Child care quality has shown to be a modest and consistent predictor children's cognitive and language skill, with a stronger relationship existing for children identified as at risk (i.e., African American, mothers with low levels of education, and low family income) than for their more advantaged peers (Vandell, 2004). Yet Burchinal et al. (2006) did not find a significant relationship between child care quality and reading in grade 2, but the relation for grade 3 was significant at the .1 level ($r = .23$). In addition, Snow and Dickinson (1991) found preschool quality to significantly correlate with fourth grade reading comprehension at $r = .36$ ($p < .007$).

Home literacy environment. The activities a child engages in outside of school have also been significantly related to their reading comprehension. Snow and Dickinson (1991) report that the home literacy activities observed in the home at age 3-5 correlate significantly ($r = .30-.38$) with students' fourth grade reading comprehension scores. Baker, Mackler, Sonnenschein, & Serpell (2002) found that the frequency of kindergarten and first grade storybook ($r = .34$, $p < .01$) and grades 2 and 3 chapter book ($r = .59$ and

.63, $p < .001$) reading was significantly correlated with third grade reading comprehension. Time spent reading was also found to correlate with fifth grade students scores on the Gates-MacGinitie Reading Tests— $r = .18$ to $.22$ (Long & Henderson, 1973). In addition, Anderson, Wilson, and Fielding (1988) note medium correlations ($r = .21$ -.39) between fifth grade reading comprehension performance and the time students spent outside of school eating dinner, going out, playing games, practicing/lessons, and reading books. These authors also identified a negative correlation ($r = -.22$) between reading comprehension and the amount of time these fifth graders spent listening to music; and found that activities such as doing homework and reading comic books had only a small correlation with reading comprehension $r = .14$ and $r = .10$, respectively. Moreover, reading informational materials (i.e., mail, newspapers and magazines), talking on the telephone, and watching television were all found to have small and negative correlations with reading comprehension ($r = -.06$ to $-.15$). In regards to television exposure, Beentjes and Van der Voort's (1988) literature review reported a curvilinear relationship exists between television exposure and reading skill. Specifically, the relationship was neutral or positive with less than 3 hours of exposure per day, slightly negative when daily exposure was between 3-6 hours, and strongly negative with more than 6 hours a day.

It should be noted that these relations may differ for student with reading disabilities. Rashid, Morris, and Sevcik (2005) found that the reading comprehension ability of children with reading disabilities is significantly related to parent home literacy activities ($r = .41$, $p < .01$), but not the children's ($r = .16$). These authors report that after controlling for the student IQ and maternal education, parent literacy activities account

for a significant amount of variance in student passage comprehension ($\Delta R^2 = .07, p < .05$).

Parental activities, such as their reading and instructional habits, influence their participation in their child's education and building of capital (Snow, 2002). The nature of parental-child interaction has been found to be a significant predictor of a child's literacy development and schools success (Harvey, 2002). For example, the quality of mothers instruction to their child at 42 months was correlates at $r = .31$ with teachers ratings of child's academic achievement in grade 3 (Englund, Luckner, Whaley, & Egeland, 2004). Unfortunately, fewer literacy activities take place in low income homes (Sonnenschein et al., 1997; Snow 2002; Whitehurst & Lonigan, 1998). Children experiencing poverty have been found to be exposed to shared book reading less often and of poor quality than their non-impooverished peers, and have more restricted exposure to print and diverse elements of society (Harvey, 2002). According to Harvey (2002) parent attitudes about reading also influence their child's reading development, and again those parents who have less education tend to show less interest in books and are less likely to ensure books are in the home.

Parent cognitive and reading ability. Elbro and Scarborough (in press) note that while home literacy activities have been found to be correlate with reading development, parent reading ability tends to be a stronger predictor than their reading behavior. These authors report that controlling for parental reading ability substantially decreases the impact of other socioeconomic predictors. However, it is unclear how these authors define socioeconomic predictors and no studies examining parental reading ability on the reading comprehension performance of elementary students were identified. Although,

measures of the mother's general intelligence were employed in two studies using broad reading measures that included comprehension items. Burchinal et al. (2006) report that maternal IQ significantly correlated with child's second and third grade Woodcock Johnson-Revised reading scores, $r = .28$ and $r = .36$, respectively. While, Vandell and Ramanan (1992) note mothers' scores on the Armed Forces Qualification Test (AFQT), a measure used to assess one's trainability and intellectual aptitude, significantly predict ($b = .50$) their child's second grade reading achievement score. Gilger, Ho, Whipple, and Spitz (2001) propose that certain parents may have a genetic predisposition for language skills resulting in their being good communicators. These parents are likely to not only pass these genes on to their child, but also provide a linguistic environment that fosters their child's language and social development.

Social Capital

The final component of family background to be reviewed is social capital which consists of a family's or individual's environmental norms, relations, and supports. Social capital sets the stage for the transmission of human capital from one generation to the next (Parcel et al., 1996).

Family composition. The first, and generally the closest, members of a child's social network are their family members. Features such as the number of individuals in the home and parent marital status can impact the social capital available. Parcel et al. (1996) propose that having two parents in the home is expected to increase a child's chances for parent-child interactions; while having siblings is expected to have a negative effect on development in that siblings serve to dilute the time, emotional, and financial

support available to the child. According to Ricciuti (2004), U.S. Census data suggests that single mothers are less likely to be able to provide the same level of parenting, social, or economic resources as two-parent families. Snow and Dickinson (1991) also report that the size of students' household at age 3 is negatively correlated ($r = -.29, p < .03$) with reading comprehension in grade 4. Moreover, students' academic achievement (including reading comprehension) is significantly predicted by household composition, $r = .26$ (Patterson et al, 1990). A family's composition is only one piece of the puzzle. Also of importance are the parent practices and involvement in the child's life. Parcel et al. (1996) note parents' interactions with their children, and the time and attention parents provide, serve to build children's social capital.

Parenting practices and involvement. Parenting practices are behaviors employed by parents in order to socialize children (Spera, 2005). Burchinal et al (2006) note that one of the strongest predictors of student academic performance is parenting, which correlates significantly with reading skill (i.e., in grade 2 $r = .48$ and in grade 3 $r = .44$). Sundstrom (1967) found parents' scores on the second factor of the Parent Attitude Research Instrument (i.e., Approval of expressions of hostility) had a moderate, negative correlation with students' in grades 3-6 reading comprehension underachievement indices ($r = -.40$ and $r = -.50$). That is, those mothers that respond in approval of their child's expressions of hostility seem to have children who performed better in reading comprehension (i.e., had a lower underachievement score).

In addition, parent initiated involvement in their child's schooling has been found to have a strong, positive relationship with school outcomes (Spera, 2005). Shaver and Walls (1998) report that parent involvement has a significant main effect on student

reading comprehension ($F(1, 257) = 8.14, p < .01$) for Title 1 students in grades 2-8. Jaynes' (2003) meta-analytic review also found parent involvement had a significant effect ($ES .43$ to $.48$) on the academic achievement of minority group children (i.e., African, Latino, and Asian Americans). Teachers' ratings of academic achievement in grade 3 also relate ($r = .33$) to that year's parent involvement (Englund, Luckner, Whaley, & Egeland, 2004). Parenting practices and the manner in which parents choose to involve themselves in child's environment convey their aspirations and expectations for that child.

Parent aspirations and expectations. Parent aspirations and expectations are the desired and stated outcomes held by parents for their children (Spera, 2005). Gill and Reynolds (1996) found that parent expectations were significantly correlated $r = .27$ with sixth grade students reading achievement as measured by the Iowa Test of Basic Skills. Parent expectations were also related ($r = .32$) with teachers ratings of academic achievement in grade 3 (Englund, Luckner, Whaley, & Egeland, 2004).

Social network. Having a strong social network can help to convey environmental norms and values, while reinforcing parental expectations. Social networks may also facilitate development by providing time as well as emotional and economic support to the child and/or parent(s). Nevertheless, a social network is only as strong as the resources it provides. Samuelsson (1997) reports no difference in the number of people in children's social networks due to SES; but those of single-parents of higher SES indicate more satisfaction in their network, had networks which involve more children, and report a greater number of and closer relations to relatives. Those parents classified as having a low SES on the other hand report a restriction of possibilities. That is, they are unable to

provide more than the bare necessities of life. As a result their children are not involved in activities considered to be stimulating or that would encourage the development of positive contacts (Samuelsson, 1997).

Possible Moderators

It appears that elements of one's family background influence each other as well as development in general. There is research suggesting that the effect of social factors vary based on race and level of SES (see Berliner, 2005 and Sirin, 2005). Sirin's (2005) SES meta-analysis reports that the strength of relationship between SES and achievement is weaker for minorities than for European Americans. The author notes that when examining minority group students' SES researchers should incorporate additional indicators such as accumulated wealth and home resources. Turkheimer, Haley, Waldron, D' Onofrio, and Gottesman, (2003) found that shared environment accounted for 60% of variance in IQ in impoverished families, with the genetic contribution being close to zero. The authors also indicate that these relations were reversed in affluent families. These findings present the need to further examine the relations and interactions between these social and cognitive variables. In addition, Duncan and Magnuson (2005) and Jencks and Phillips (1998) suggest the need to control for cognitive abilities and mental health of parents in order to better understand the effect of these social factors. Children's poor social-emotional, cognitive, and academic development have been linked to maternal depression (Burchinal et al, 2006). Antshel & Joseph (2006) also note that SES and parenting stress are strongly and inversely related. Although, other factors such as number of parents in the home, the child's age, gender, disability status, and mother's age

moderate levels of parental stress. That is, higher levels of stress are reported when one is a single parent, has an older or male child, has a child with a learning disability, or is an older mother (Antshel & Joseph, 2006).

Another factor shown to relate to reading comprehension performance is student behavior. O'Shaughnessy & Swanson (2000) report that teachers' ratings of academic competence were correlated ($r = .49$) with the passage comprehension scores of second grade students with reading disabilities. Also, Hecht & Greenfield (2002) report a large and significant correlation ($r = .68$) between teacher ratings of academic competence and third grade reading comprehension performance. These authors note that approximately 47% of the variance in reading comprehension skill was captured by teacher ratings. In spite of this, behavior ratings added little when first grade emergent literacy skills were controlled for in this study.

The studies presented in this review show that many background factors are related to children's reading comprehension performance. However, we still have a lot to learn about the nature of these relationships to each other and reading development in general. The following study attempts to examine a broad measure of capital which incorporates all of the aforementioned family background variables while examining, and if appropriate controlling for, possible moderators such as race, IQ (parent and child), parental stress and depression, and student behavior ratings. Through this examination we hope to determine if certain background variables are more important than others for struggling readers and how these factors relate to one another.

CHAPTER III

METHODOLOGY

Participants

Study participants were the primary caregivers of 51 students assessed for participation in reading interventions conducted at a private university located in the southeastern United States. The caregivers were 25-71 years old ($M = 40$) and 96% of caregivers were female ($N = 49$). Eighty-six percent ($N = 44$) of caregivers identified themselves as the students biological mother. The remaining primary caregivers consisted of two grandmothers, one grandfather, a father, an adoptive mother, and two legal guardians. The racial breakdown of the sample was 26 African Americans, 22 European Americans, 1 Hispanic American, and 2 were classified as “Other”. See Table 1 for more information on the descriptive characteristics of the caregivers and their children.

Of the 51 students, 7 attended the university’s reading clinic for one-to-one reading remediation, 42 participated in a small group reading comprehension intervention for struggling readers in grades 2-6, and 2 students were screened for the intervention study but did not participate. Those students selected for the reading intervention scored at least one *SD* below the mean (i.e., a standard score of 85 or below) on two or more of the reading tests administered (i.e., GORT-Accuracy, Fluency, and Comprehension; and TOWRE-Sight Word Efficiency and Phonemic Decoding Efficiency), and they were able to read more than 45 words per minute on second-grade level Curriculum Based Measures of passage fluency.

These criteria were used to identify students whose comprehension skills were low in comparison to their reading fluency.

Table 1

Descriptive Characteristics of Participants and their Children (N = 51).

Variable			N (%)
	Parents		
Age at time of interview		<30	4 (7.8)
		30-40	25 (49.0)
		41-50	18 (35.3)
		51 +	4 (7.8)
Relationship to Child		Birth Parent	45 (88.2)
		Adoptive Parent	1 (2.0)
		Grandparent	3 (5.9)
		Other	2 (3.9)
Marital Status		Married or Living as Married	26 (51.0)
		Single, Separated/Divorced, Widowed	25 (49.0)
Highest Level of Education		High School or GED	3 (5.9)
		Some College	10 (19.6)
		Specialized or Vocational Training	9 (17.6)
		Associates or 2 Year Degree	6 (11.8)
		Bachelors Degree	11 (21.6)
		Some Graduate School	4 (7.8)
		Graduate or Professional Degree	8 (15.7)

Table 1 (continued)

Variable		<i>N</i> (%)
Household Income	< \$15,000	4 (7.8)
	\$15,000-25,000	6 (11.8)
	\$25,001-50,000	23 (45.1)
	\$50,001-75,000	7 (13.7)
	>\$75,001	11 (21.6)
Students		
Gender	Female	22 (43.1)
	Male	29 (56.9)
Age	7	1 (2.0)
	8	6 (11.8)
	9	12 (23.5)
	10	16 (31.4)
	11	10 (19.6)
	12	5 (9.8)
Grade	13	1 (2.0)
	2	2 (2.0)
	3	15 (29.4)
	4	16 (31.4)
	5	10 (19.6)
Race	6	8 (15.7)
	African American	28 (54.9)
	European American	16 (31.4)
	Hispanic	2 (3.9)
	Other	5 (9.8)

Table 1 (*continued*)

Variable		<i>N</i> (%)
Attend Title 1 School	Yes	13 (25.5)
	No	30 (58.8)
	Unknown	8 (15.7)
Receives Lunch Subsidy	Yes	22 (43.1)
	No	29 (56.9)
Disability Status	No Diagnosed Disability	27 (52.9)
	Learning Disability (LD)	7 (13.7)
	Attention Deficit (ADD/ADHD)	1 (2.0)
	Multiple Disabilities	10 (19.6)
	Other	6 (11.8)

Procedures

To be considered for participation in this intervention study, parents were required to bring their children to the university for an initial assessment, and if accepted, to ensure their children's presence twice per week at 90-minute intervention sessions over a 12-week period. Parents were informed about the current research study either during the initial assessment or at the beginning of the intervention, at which time they were offered the opportunity to participate. Of the 62 parents approached, 89% ($N = 55$) agreed to participate, with 93% of those who participated completing all portions of the study.

Parents who agreed to participate in this study took part in two data collection sessions conducted while their children participated in their reading intervention sessions,

unless the parent requested another time. The first session lasted approximately 35 minutes. During this session the parents signed consent forms, completed a cognitive assessment (i.e., Wonderlic Personnel Test), reading measure (i.e., Test of Word Reading Efficiency), depression and stress measures (i.e., Center for Epidemiologic Studies-Depression Scale, Parenting Stress Index), and received two take-home surveys regarding family resources and practices (i.e., a Family Resource Survey and Parenting Dimensions Inventory). During the second session the take-home surveys were collected and a structured interview (i.e., the Family Background Survey), lasting approximately one hour was conducted to gather information regarding the families' capital. The author or a trained research assistant distributed and administered the measures to parents individually. All sessions were audio taped. Completed measures were scored by two different members of the research team, and all data were entered in duplicate to ensure accuracy. Agreement on the initial scoring of measures ranged from 86-95%. Discrepancies were examined a third time to establish agreement. A trained research assistant also used the Interview Monitoring Form adapted from Fowler and Manigone (1990) to score the quality of 27% of the author's interviews with parents. This form rates the interviewer on factors such as accuracy, pace, and probing (see Appendix A), with a possible score ranging from 0-140. All interview monitoring scores were greater than a hundred with a mean of 129 (range 100-140).

The dependent measure, the reading comprehension subtest of the Gates-MacGinitie Reading Test, was administered to students as a part of the larger intervention study. The parents of those students who did not participate in the reading comprehension intervention (i.e., children whose parents were recruited at the reading clinic or during the

screening stage of the reading intervention) were required to bring their children to the university to complete the comprehension measure, which was administered by the author.

Measures

Gates-MacGinitie Reading Test (GMRT). The comprehension subtest of the Gates-MacGinitie Reading Tests Level 3 Form S (MacGinitie, MacGinitie, Maria, & Dreyer, 2000) was administered to all students at pretest. This test is a silent reading comprehension measure requiring students to read selected passages. Students were allowed 35 minutes to mark the appropriate response to 48 items presented in a multiple-choice format. The test-retest reliability for this measure has been reported to be at or above .90 (MacGinitie et al., 2000).

Social Skills Rating System (SSRS). The parents of students participating in the reading intervention ($N = 42$) also completed the SSRS (Gresham & Elliott, 1990) during the larger study's screening process. The SSRS is a 55 item measure in which parents' rate their child as "never," "sometimes," or "very often" displaying certain social skills and problem behaviors. The social skills and problem behaviors subscales yield standardized scores, and test-retest reliabilities on the SSRS parent version have ranged from .70 to .85 (Gresham & Elliott, 1990).

Wechsler Abbreviated Scale of Intelligence (WASI). The Vocabulary and Matrix Reasoning subtests of the WASI (Wechsler, 1999) were administered to students as a part of the intervention's pretest battery to provide an estimate of general intellectual ability. The WASI is a widely used, nationally normed, standardized assessment that takes

approximately 15 minutes to administer and whose subtest reliabilities range from .87 to .92 (Weschler, 1999).

Comprehensive Test of Phonological Processing (CTOPP). The phonological subtest of the CTOPP (Wagner, Torgesen, & Rashotte, 1999) was also administered to the intervention students. It is a nationally normed measure with subtest test/retest coefficients ranging from .70 to .92 and alternative form reliability exceeding .90 (Wagner, Torgesen, & Rashotte, 1999).

Test of Word Reading Efficiency (TOWRE). This study used Form A of the TOWRE (Torgesen, Wagner, & Rashotte, 1999), a nationally normed measure of one's accuracy and fluency in reading words and non-words. The TOWRE was individually administered to all parents as a proxy of their reading ability. Students who participated in the reading intervention were administered this measure as well. Test/retest reliability for subtests ranges from .83 to .96 (Torgesen, Wagner, & Rashotte, 1999).

Wonderlic Personnel Test (WPT). During individual administrations, each parent was given 12 minutes to respond to the 50 questions presented in this standardized measure of cognitive ability. Test-retest reliability for this measure ranges from .82-.94 (Wonderlic, 2000). See Appendix B for sample items.

Center for Epidemiologic Studies-Depression Scale (CES-D). The CES-D is a 20-item, self-report Likert scale inventory intended to assess whether the respondent has experienced depressive symptoms in the past week and the severity of those symptoms. Internal-consistency reliability for this measure exceeds .85 (Radloff, 1977).

Parenting Stress Index-Short Form (PSI-SF). Another measure administered to obtain a proxy of the parents' mental and emotional states is the PSI-SF (Abidin, 1995).

The PSI-SF is a 36-item self-report Likert scale measure that provides a total stress score and subscale scores for parental distress, child difficulty, and parent-child dysfunctional interaction. Internal-consistency reliabilities exceeding .80 for all scales have been reported (Abidin, 1995).

Parenting Dimensions Inventory (PDI). Parenting practices, styles, and beliefs were assessed using the PDI (Slater & Power, 1987). The PDI is a multi-scaled, self-report questionnaire with reliability coefficients ranging from .54-.79 across scales, and with goodness-of-fit indexes ranging from .97-.99. Parents are presented statements and asked to rate how frequently certain events (e.g., discipline child, have a regular dinner schedule) occur or to what extent the statement reflects their own beliefs or practices. For example, when presented with the following statements the parent was instructed to circle the appropriate number from 1-6 (i.e., 1 = Not at all descriptive of me; 6 = Highly descriptive of me): “I encourage my child to talk about his or her troubles I believe that children should be seen and not heard . . . (Slater & Power, 1987, 1-2).”

Family Resource Survey (FRS) and Family Background Survey (FBS). In order to assess each family’s social, human, and financial capital, two additional measures, the Family Resource and Family Background Surveys, were composed by the researcher. The FRS (see Appendix C) is a self-report survey that asks questions regarding a family’s household income, wealth, poverty level, neighborhood/housing conditions, occupation, and job satisfaction. The FBS (see Appendix D) is a face-to-face interview protocol in which parents are asked questions regarding their marital status, family/household composition, transiency, social networks, home literacy environment, medical history, family stress, parental aspirations, and parental expectations. Both the FRS and FBS

attempt to measure social status at multiple periods in the child's development (i.e., birth, entry into first grade, and current status) and across generations (i.e., human capital data collected for child, parents, and grandparents). Each response on both measures was assigned a numerical value, such that the items considered to relate positively to reading development were assigned a higher value than those considered to be negatively correlated.

Development of these measures began with a review of the literature and theory regarding the effects of SES, parent and family characteristics, and home environment on student academic performance, child outcomes, and attainment. The literature on measurement of SES and survey development was also reviewed, as were relevant existing surveys. Variables identified in the literature as predictive of student academic performance were selected for inclusion in the researcher-created measures. Items for these measures were either written by the author or borrowed/adapted from the 1997 National Longitudinal Study of Youth (NLSY) Round 1 Parent Questionnaire, the Social Capital Community Benchmark, and the Educational Longitudinal Study of 2002.

To ensure that items were clear, conveyed their intended meaning, and properly organized, researcher-created measures were reviewed by the Chair of this research committee and by a linguist. Once their suggested revisions were implemented, the revised measures were piloted using a convenience sample of parents ($N = 2$) and employing a cognitive lab format. The feedback acquired from this process was used to revise the measures once again. Prior to the second round of testing, the measures were examined by an expert in survey methods. For the second round of piloting, parents who had participated in a similar reading intervention study one year earlier were recruited (N

= 3). Due to the limited number of participants available from the previous study, a convenience sample of parents ($N = 5$) was also included. These parents were presented and administered these measures in the same manner as the subjects of this study. See Table 2 for descriptive information regarding the pilot sample.

It was decided to collect data from parents in survey and interview format due to the desire to gather information on multiple periods in the child's development, including information which could not be gathered through observation or student report (e.g., number of books read to child at younger age; number of individuals in home at birth, when entered grade 1, currently). Also Sirin (2005) reported that parental report of SES was a better predictor of academic performance, than data collected from secondary sources or child reports. While there have been questions as to the reliability of survey data (Desimone, in press), research has found criticisms to be overstated and/or unfounded when accepted developmental and methodological guidelines are employed (see Fowler, 1995; Mayer, 1999; Porter, Kirst, Osthoff, Smithson, & Schneider, 1993).

Computing Family Capital Indexes

Data collected using the aforementioned instruments were sorted according to the constructs they addressed (see Appendix E for details). Response values were then summed for each construct to create index scores for social capital, human capital, and financial capital, as well as a total capital score, for each participant. In formulating these index scores constants (i.e., items in which 90% or more of the respondent answered in the same manner) were removed from an index. Missing data were replaced with the sample's mean value or, in the case of income, with an imputation based on data

Table 2

Descriptive Details of Pilot Sample (N = 10).

Characteristic		N
Gender	Male	2
	Female	8
Age	<30	0
	30-40	4
	41-50	3
	51 +	1
Race	African American	7
	European American	3
Marital Status	Married or Living as Married	4
	Single, Separated, or Divorced	4
Highest Level of Education	Some College	1
	Associates/Vocational Degree	3
	Bachelors	1
	Masters	4
	Ph.D.	1
Household Income	< \$15,000	1
	\$15,000-25,000	1
	\$25,001-50,000	2
	\$50,001-75,000	2
	>\$75,001	4

provided by respondent. For example, if a respondent did not provide income information, but did specify that they had a Masters degree and taught elementary school in the local school system for seven years this information was entered into www.salary.com, and the median regional income for individuals with similar qualifications was designated as their salary.

The human, social and financial indexes were comprised of multiple components. Each capital index was formed by first summing the items for each of their components, dividing that value by the number of components in the index, then adding those values. For example, a participant's human capital was composed of four components-education, occupation, home literacy environment, and parent cognitive/reading ability. The various test and survey items that served to measure these components of human capital were added to represent a family's score for each component. Each component score was then divided by four because each represented $\frac{1}{4}$ of human capital. The resulting values were summed, and represent the family's human capital index score. Specific information regarding the computation of each index is provided in Appendix F.

CHAPTER IV

ANALYSIS AND RESULTS

Index scores for social capital, human capital, and financial capital, as well as a total capital, were computed for each participant. Correlations between these capital indexes, their components, and possible mediators and moderators were examined. Regression analyses were then conducted to determine the relationships between the predictor variables (human, social, financial, and total capital) and the criterion variable (student reading comprehension performance). A principal component analysis of the family background indexes was also conducted to explore how well the components selected (e.g., wealth, social network, education) fit the theorized model. However, due to the limited sample involved in this analysis it was decided to run regression analyses based on the theoretical model, rather than employing factor loadings.

Correlations

Correlations among Family Background Variables and Reading Comprehension

Table 3 presents the zero order correlations between the components of family background and reading comprehension. All reported correlations were significant at $p < .05$ unless otherwise stated. While many of the family background indexes were significantly correlated with one another as expected, there were no significant correlations demonstrated between the financial, human, and social capital indexes and

the reading comprehension measure. However, the occupation and education indexes were significantly correlated with reading comprehension ($r = .35$ and $.41$, respectively), as were the correlation between reading comprehension and total capital ($r = .23$) and income ($r = .25$) when a less stringent criterion ($p < .1$) was employed. Partial correlations controlling for grade and recruitment site were also computed (see Table 4), yielding significant correlations between reading comprehension and the financial, human, and total capital indexes ($r = .33$, $.31$, & $.34$, respectively) and a marginally positive association between reading comprehension and social capital ($r = .26$, $p < .08$).

Given that human, financial, and social capital have moderate to strong correlations with each other, a check for multicollinearity was conducted. Each form of capital was regressed on the other components of family background. The largest R^2 from these equations was $.40$, a value far enough from 1 to suggest multicollinearity is not a problem (see Lewis-Beck, 1980).

Correlations between Moderators, Capital, and Comprehension

Intercorrelations were examined among reading comprehension, capital indexes and moderators including child's race, gender, grade, and cognitive/reading skill (measured by the WASI and TOWRE for those students participating in the intervention study; $N = 42$); as well as parental scores on the TOWRE and WPT, and ratings of stress, depression, and student behavior. In cases in which a dichotomous variables such as race and gender were related to continuous variables (e.g., comprehension and capital scores) point biserial correlations were employed.

Table 3

Zero Order Correlations between Reading Comprehension and Capital Indexes (Full Model)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. GMRT-Comprehend	1															
2. Financial Capital	.22	1														
3. Wealth	.21	.76*	1													
4. Income	.25	.90*	.61*	1												
5. Poverty	.05	.63*	.43*	.50*	1											
6. Employment	.09	.69*	.24	.52*	.18	1										
7. Human Capital	.22	.53*	.37*	.58*	.33*	.28*	1									
8. Occupation	.35*	.62*	.36*	.63*	.31*	.50*	.66*	1								
9. Education	.42*	.58*	.40*	.64*	.43*	.27	.67*	.64*	1							
10. Home Literacy	.03	.23	.13	.35*	.12	.07	.69*	.43*	.43*	1						
11. Cognitive/Reading	.15	.43*	.34*	.41*	.28*	.24	.85*	.41*	.41*	.26	1					
12. Social Capital	.18	.35*	.15	.34*	.25	.29*	.51*	.48*	.42*	.68*	.18	1				
13. Social Network	.10	.58*	.35*	.53*	.49*	.40*	.57*	.64*	.44*	.63*	.27	.67*	1			
14. Family Composition	.06	.61*	.36*	.65*	.29*	.47*	.51*	.51*	.35*	.31*	.43*	.22	.49*	1		
15. Aspiration/Expectations	.07	-.35*	-.28*	-.29*	-.26	-.23	-.29*	-.29*	-.17	-.15	-.27	.26	-.36*	-.43*	1	
16. Practices/Involvement	.10	.28*	.15	.25	.15	.26	.52*	.38*	.38*	.59*	.27	.65*	.38*	.20	-.27	1
17. Total Capital	.23	.65*	.43*	.66*	.43*	.43*	.89*	.71*	.68*	.73*	.64*	.81*	.73*	.50*	-.11	.64*

Note. GMRT-Comprehend = Gates-MacGinitie Reading Tests- Comprehension Subtest.

.`p < .1, *p < .05

Table 4

Partial Correlations between Reading Comprehension and Capital Indexes Controlling for Grade and Recruitment Site (Full Model)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. GMRT-Comprehend	1															
2. Financial Capital	.33*	1														
3. Wealth	.29*	.73*	1													
4. Income	.33*	.92*	.64*	1												
5. Poverty	.25	.60*	.38*	.51*	1											
6. Employment	.12	.68*	.17	.51*	.14	1										
7. Human Capital	.31*	.63*	.54*	.61*	.40*	.33*	1									
8. Occupation	.44*	.66*	.42*	.64*	.34*	.51*	.66*	1								
9. Education	.46*	.64*	.49*	.66*	.50*	.29*	.68*	.64*	1							
10. Home Literacy	.12	.37*	.34*	.40*	.20	.15	.67*	.45*	.44*	1						
11. Cognitive/Reading	.21	.48*	.43*	.42*	.31*	.26	.85*	.41*	.42*	.24	1					
12. Social Capital	.26	.38*	.21	.35*	.27	.31*	.51*	.48*	.42*	.69*	.17	1				
13. Social Network	.23	.58*	.35*	.53*	.46*	.39*	.60*	.65*	.46*	.69*	.27	.68*	1			
14. Family Composition	.21	.70*	.50*	.67*	.30*	.52*	.50*	.52*	.37*	.26*	.42*	.20	.49*	1		
15. Aspiration/Expectations	.04	-.37*	-.30*	-.29*	-.26	-.22	-.30*	-.29*	-.18	-.16	-.27	.26	-.36*	-.44*	1	
16. Practices/Involvement	.11	.35*	.26	.26	.21	.30*	.51*	.39*	.38*	.58*	.26	.65*	.41*	.18	-.28	1
17. Total Capital	.34*	.71*	.53*	.67*	.46*	.45*	.90*	.71*	.69*	.75*	.64*	.81*	.74*	.48*	-.10	.64*

Note. GMRT-Comprehend = Gates-MacGinitie Reading Tests- Comprehension Subtest

ˆp < .1, *p < .05

Relations with each other and capital. Respondent's race had a significant correlation with parent ratings on the CES-D ($r = -.34$) signaling that African American parents of struggling readers reported higher levels of depressive symptoms. In addition, CES-D scores were significantly correlated with the parental stress scores ($r = .46$), and the human ($r = -.46$) and total ($r = -.33$) capital indexes. That is, those reporting a larger number of depressive symptoms also reported a high parental stress score and lower levels of human and total capital. Child's gender and race was correlated with human capital ($r = .32$ and $.28$, respectively). Child's race was also found to correlate with financial capital ($r = .34$), social capital ($r = .33$), and whether the student received FRL ($r = .38$) with ethnic minorities falling at the lower end of these variables. Higher levels of human capital were also present in male and non-minority students.

Parent reports of child behavior and social skills showed moderate correlations with the race of the respondent ($r = .31$), human capital ($r = .32$), and child's standard score on the phonemic decoding subtest of the TOWRE ($r = -.32$). The student's phonemic awareness was also positively correlated to human ($r = .37$) and total ($r = .34$) capital; while parent scores on the TOWRE (sight word and phonemic decoding, respectively) correlated with their WPT score ($r = .32$, $r = .43$), child's gender ($r = .34$, $r = .29$), and human ($r = .63$, $r = .74$), financial ($r = .39$, $r = .33$) and total ($r = .48$, $r = .54$) capital. In addition, parent cognitive skill (i.e., their score on WPT) was found to positively correlate with their human ($r = .71$), financial ($r = .33$), and total capital ($r = .56$) scores; as well as their ($r = .39$) and their child's ($r = .30$) race, the student's behavior rating ($r = .28$), and the child's phonemic awareness score on the CTOPP ($r = .35$). It is not surprising that positive scores in social, cognitive, and reading skills would

relate positively with capital scores. It is plausible that parents who had more difficulty with the cognitive task are likely to have children who have difficulty with academic activities and display more behavioral/social difficulty in the school setting. However, it is unclear why social skills would be negatively correlated with the students' TOWRE score or why child's gender was related to parent reading skill.

Relations with reading comprehension. Of the moderators examined, only student grade ($r = .45$) and their standard scores on the TOWRE ($r = -.33$) were significantly related to reading comprehension scores. These moderators were also correlated with each other ($r = -.67$) and once grade was controlled for the TOWRE scores did not significantly add to the prediction of reading comprehension scores ($\beta = .01, t = .05, p = .96$). Given these results and the larger study's decision to administer the third grade Gates protocol to all students, grade level was controlled for in all regression analyses. Recruitment site was also controlled for due to its significant correlation with financial capital ($r = -.31$).

Multiple Regression Models

Does family background help predict reading comprehension performance in elementary aged, struggling readers?

The capital indexes, and their component indexes, were entered independently into the regression equations after controlling for grade level and recruitment site, in order to determine whether family background and its components accounted for a portion of the variability in reading comprehension performance (see Table 5). Family background (i.e., total capital), as well as its human and financial capital components,

each added significantly ($p < .05$) to the regression equation when entered independently. Social capital however resulted in a significant F change value of .08.

Table 5

Summary of Regression Statistics for Family Background Variables Predicting Student's Reading Comprehension Performance (N = 51)

Capital Indexes	β	T	R^2	Sig. $F\Delta$
Financial Capital	0.30	2.40*	0.36	0.02
Wealth	0.28	2.10*	0.35	0.04
Income	0.28	2.41*	0.36	0.02
Poverty	0.23	1.80`	0.33	0.08
Employment	0.11	0.84	0.30	0.41
Human Capital	0.27	2.25*	0.36	0.03
Education	0.39	3.58*	0.44	0.00
Occupation	0.37	3.34*	0.42	0.00
Home Literacy Environment	0.10	0.80	0.30	0.43
Cognitive/Reading Ability	0.18	1.49	0.32	0.14
Social Capital	0.22	1.80`	0.33	0.08
Social Network	0.20	1.60	0.32	0.12
Family Composition	0.18	1.48	0.32	0.15
Parent Aspirations/Expectations	0.03	0.27	0.29	0.79
Parenting Practices/Involvement	0.10	0.79	0.30	0.43
Total Capital	0.29	2.48*	0.37	0.02

Note. Data is based on a model in which grade and recruitment site is entered in step 1 of equation. Each index entered in a separate regression equation.

` $p < .1$ * $p < .05$.

Are certain forms of capital more predictive of reading comprehension performance, and/or serve to mediate the effect of family background?

Each of the three components of family background were also entered into the same regression analyses. When human capital was entered first the other components failed to add anything significant to the prediction of the reading comprehension score ($R^2 = .36$; *Significant $f\Delta = .03$*). The same was true when financial capital was the first form of capital entered ($R^2 = .36$; *Significant $f\Delta = .02$*), yet when social capital was accounted for first no significant change in f occurred for any of the capital indexes. Though social capital was not a significant predictor, its inclusion prior to human and financial capital seemed to inhibit their predictive abilities. Further examination of the variables that comprise human, financial, and social capital showed that only four composites were significant predictors of reading comprehension performance in this sample—education, occupation, wealth, and income.

Additional regression analyses were conducted to assess whether social capital mediated the effects of human and financial capital. A composite sum of human and financial capital was formed to represent the independent variable in the analyses (see Table 6). The results suggest that social capital does not mediate the relationship between human and financial capital and reading comprehension. While the independent variable affected the mediator, it failed to have a statistically significant affect on the dependent variable; as did the mediator when both the human-financial capital composite and social capital were entered.

Table 6

Regression Analyses Testing Social Capital as a Mediator between Human and Financial Capital and Student's Comprehension Performance

Equation	β	t	R^2	Sig. $F\Delta$
Full Model				
SC regressed on H/FC	.52	4.25*	.27	.00
Comprehension regressed on H/FC	.24	1.75	.06	.09
Comprehension regressed on H/FC and SC	.07	.42	.06	.21
Revised Model				
SC regressed on H/FC	-.39	-2.92*	.15	.01
Comprehension regressed on H/FC	.48	3.86*	.23	.00
Comprehension regressed on H/FC and SC	-.23	-1.71`	.28	.00

Note. SC = social capital, H/FC = Sum of Human and Financial Capital.
` $p < .1$, * $p < .05$.

Does the relation between family background and reading comprehension vary by level of total capital?

This study was not only interested in whether capital was predictive but also if the relation between family background and reading comprehension differed based on the level of capital one has. In order to determine if the same patterns held at various levels of capital the total capital scores were divided into 4 groups representing more than 1 *SD* below the mean (group 1), within 1 *SD* below mean (group 2), less than 1 *SD* above mean (group 3), or more than 1 *SD* above mean (group 4). We were unable to run regression analyses due to the limited sample represented in each group (i.e., $N = 8, 17, 21, 5$), so group mean comprehension scores were reviewed. The mean reading comprehension

scores increased with level of capital (i.e., group 1 = 16.25, group 2 = 19.00, group 3 = 20.67, and group 4 = 25.80); however there was significant overlap in the range of scores by group (see Figure 1). An ANCOVA comparing means between groups 1-4, while allowing grade to covary, showed no significant difference between groups ($F(3, 46) = 2.13, p = 0.11$).

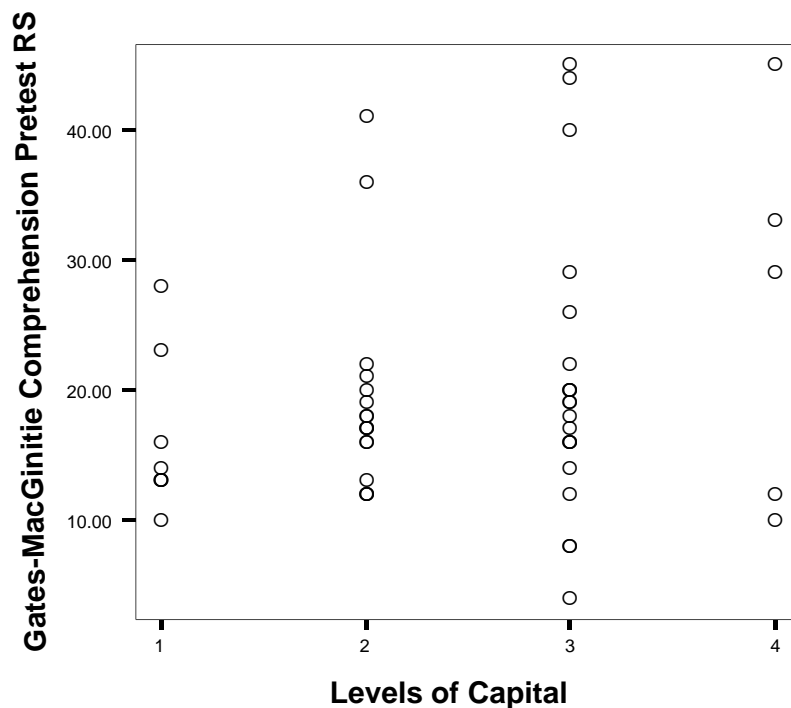


Figure 1. Distribution of reading comprehension scores across levels of total capital.

Is family background more predictive than traditional SES measures?

Another question this study purported to answer was whether family background was more predictive of reading comprehension ability than traditional socioeconomic measures, specifically the Hollingshead and lunch subsidy status. Comparison between

the total capital index, Hollingshead, and lunch status found that the Hollingshead was strongly correlated with all of the capital indexes ($r = .41-.58$); while lunch subsidy status had a moderate relationship with human and total capital ($r = .31$ and $.38$, respectively) and a strong relationship ($r = .56$) with financial capital. When included in the regression equation controlling for grade and site, the total capital and Hollingshead score were nearly equal in what they added to the prediction equation, yet lunch status did not significantly account for any of the variability in reading comprehension performance (see Table 7).

Table 7

Regression Statistics for Family Background and Other Commonly Used Measures of Socioeconomic Status on Reading Comprehension (N = 51)

Social Status Measure	β	T	R^2	Sig. FA
Total Capital	0.29	2.48*	0.37	0.02
Hollingshead	0.28	2.37*	0.36	0.02
Free and Reduced Lunch	0.16	1.31	0.31	0.20

Note. Data is based on a model in which grade and recruitment site is entered in step 1 of equation. Each measure entered into separate regression equation.

* $p < .05$

Does the examination of family background add to the prediction of reading comprehension ability above traditional cognitive and linguistic measures?

Previous analyses show that family background does account for a significant amount of variability in reading comprehension, but we have yet to determine if this effect remains when general intellectual and reading abilities are controlled for. When parent and student cognitive scores (measured by the WPT and WASI) were each added to prediction equation there was no significant change in the prediction of reading

comprehension, however total capital remained a significant predictor. The same was true when the parents' and children's TOWRE raw scores were included.

Do other variables (e.g., race, gender, behavior, and psychological factors) predict reading comprehension performance or impact its relationship with family background?

In addition to cognitive and reading skills, other variables believed to possibly affect the social and cognitive environment were examined. It was discovered that controlling for student race and gender did not add anything significant to the prediction equations; nor did the respondents' age, CES-D scores, and reports of family stress. While the overall parental stress index was not correlated significantly with reading comprehension two items were—average of parents satisfaction with work ($r = .30, p = .03$) and respondents health rating ($r = .28, p = .04$). Parents rating of student's school behavior also failed to be predictive of their reading comprehension score, yet the subsample who provided ratings of their child's social skills using the SSRS ($N = 40$) did provide information which significantly added to the prediction equation ($R^2 = .31, \beta = .29, p = .04$). Whether the student attended a Title 1 school was also predictive ($R^2 = .43, \beta = .29, p = .02$), however this information was only available for 85% of the total sample.

Given these findings, the regression equation including grade and total capital score (recruitment site was removed because the SSSR was only administered to one site) was ran again including controls for social skills and attendance of a Title 1 school. When social skills and Title 1 status were entered into the equation following total capital they did not add anything significant to the prediction of the reading comprehension outcome for the reading intervention subgroup. Then again, when total capital was entered last in

this equation only grade level was significantly predictive. In all, when social skills were controlled for this subsample, total capital was not significantly predictive; and when total capital was controlled social skills were not.

Model Efficiency

A broad range of items were assessed using the family background measures in the hopes of detecting the few that might be the most predictive. Unfortunately, the sample obtained did not afford the ability to run more advanced statistical analyses to determine how individual items loaded together or what variables contributed the most within a full model. As a result it was decided to recalculate each index including only items with significant ($p < .05$) zero-order correlations with reading comprehension (See Appendix G). In spite of the limited sample, an exploratory principal component analysis involving the revised subcomponents proposed to comprise financial, human, and social capital was conducted to determine if the theorized patterns were accurate (see Figure 2).

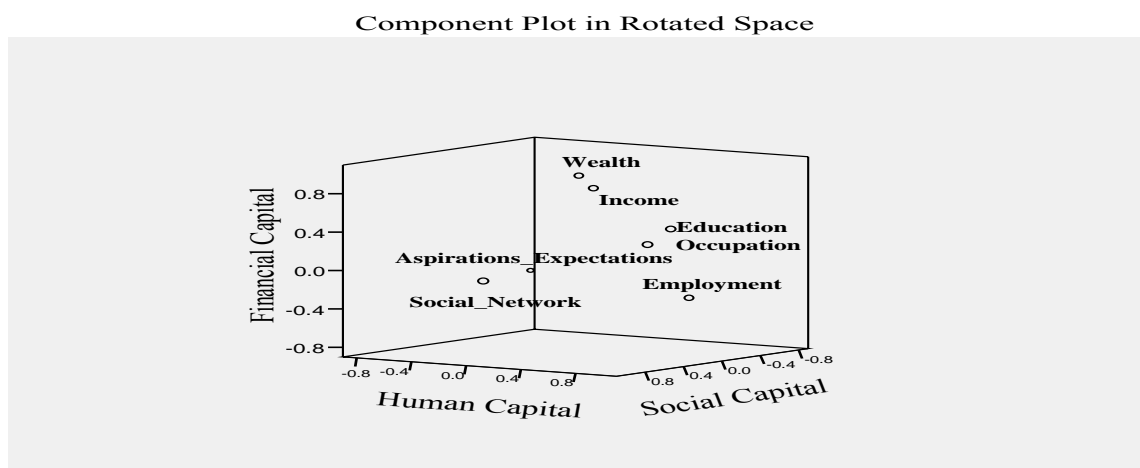


Figure 2. Plot of revised family background components using varimax rotation.

Using a varimax rotation, this analysis extracted three components which aligned with the theorized capital components, though a couple of variables did overlap capital indexes (see Table 8).

Table 8

Varimax Rotated Component Matrix based on Principal Component Analysis of Revised Capital Constructs

Capital Sub-constructs	Component		
	1	2	3
Employment	.73		
Education	.73	.44	
Occupation	.72		
Aspirations and Expectations	-.63		-.48
Wealth		.92	
Income		.83	
Social Network			.95

Note. Values < .40 are not displayed.

Post-hoc regression analyses were conducted employing the revised indexes in order to determine whether a significant amount of variability in reading comprehension performance could be accounted for using fewer variables; thereby requiring less time and fewer resources. A summary of these analyses are presented in Table 9.

Revised Model

Variability accounted for. Each of the revised indexes was found to explain a significant amount of variability in reading comprehension performance ($p < .01$) when

entered independently in a regression controlling for recruitment site and grade level. Of the components of family background, human capital accounted for the largest amount of variability ($\beta = .45$). When the revised human, social, and financial capital values were all entered in the equation human capital was the only variable to add anything significant ($\beta = .35, t = 2.92, p < .01$), regardless of order entered.

Table 9

Post-hoc Regression Analyses Predicting Student's Comprehension Performance based on Revised Family Background Variables (N = 51)

Indexes	β	t	R^2	Sig. $F\Delta$
Financial Capital (Revised)	0.33	2.73**	0.38	0.01
Wealth	0.25	2.01*	0.34	0.05
Income	0.32	2.75*	0.39	0.01
Employment	0.10	0.81	0.30	0.42
Human Capital (Revised)	0.45	4.35*	0.49	0.00
Education	0.47	4.53*	0.53	0.00
Occupation	0.37	3.34*	0.42	0.00
Social Capital (Revised)	-0.33	-2.83*	0.39	0.01
Social Network	0.07	0.59	0.29	0.56
Parent Aspirations/Expectations	-0.40	-3.69*	0.45	0.00
Total Capital (Revised)	0.43	4.06*	0.47	0.00

Note. Data is based on a model in which grade and recruitment site is entered in step 1 of equation. Each index entered independently.

* $p < .05$

The revised social capital index also showed no signs of mediating the relationship between revised human/financial capital composite and reading comprehension (see Table 6). Unlike the full model, when the revised capital indexes were divided into four levels of capital, there was a significant group mean difference in reading comprehension

scores ($F(3, 46) = 3.08, p < .04$) with those reporting higher levels of capital having higher comprehension scores (i.e., group 1 $M = 17.17$, group 2 $M = 17.58$, group 3 $M = 20.56$, group 4 $M = 27.10$). Further, this revised model of family background accounted for significantly more of the variance in reading performance ($\beta = .43$) than the original total capital index ($\beta = .29$), Hollingshead ($\beta = .28$), or lunch subsidy status ($\beta = .16$). The revised total capital added significantly to the prediction equation even after controlling for Hollingshead score ($\beta = .46, t = 3.09, p < .01$). As with the original total capital SSRS continued to be significant in the prediction equation, however the respondent's and child's race, cognitive and reading scores did not; nor did the parents ratings of depression, stress, or student school behavior. Moreover, the revised total capital index continued to significantly contribute with each of the aforementioned variables being controlled.

Notable mentions. Although not included in the revised model, several variables may prove to be noteworthy with a larger and more diverse sample. For example, while none of the home literacy items were found to correlate with reading comprehension at .05, parents response to whether they talked about what was happening in the stories read to child was correlated ($r = .25$) at .08. Also, the frequency in which the respondent or another adult attended field trips with student was correlated with reading comprehension ($r = -.25$) at .08. Other items whose correlations with reading comprehension had a $p < .1$ include respondent's report of barriers to community involvement ($r = -.23$), the proportion of child's friends ($r = .26$) and parents of their friends ($r = .23$) known by respondent; as well as whether the respondent considers these parents to be his/her friends ($r = .26$).

In sum, regression analyses found components of family background were significantly related to students' comprehension scores on the Gates MacGinitie Reading Test; and accounted for as much, or more, variability than either the Hollingshead or lunch subsidy status. In addition, these results were consistent regardless of general intellectual ability, reading skill, or behavior and emotional ratings. While these findings suggest family background may play an important role in reading comprehension development, it should be noted that a significant amount of variability remains unaccounted for; and no claims of causality can be made due to the fact that this information is based on non-experimental data.

CHAPTER V

CONCLUSIONS

The purpose of this study was to examine the role of family background in the reading comprehension ability of struggling readers in the elementary grades. This study serves as an expansion of the literature in that previous research tends to focus on children of preschool or early elementary years. Few studies examine the impact of these family background variables (especially social capital) in one report, or during later stages of reading development. This study found that the overall family background index (i.e., total capital) accounted for a significant amount of the variability in student reading comprehension scores once grade level and tutoring site were accounted for. Upon revision, this social measure accounted for more variance than either the Hollingshead or lunch subsidy designation. Approximately 37% of the variability was accounted for by grade level, tutoring site, and total capital score, and 47% with the revised capital measure.

Variables from each form of capital were significantly related to student comprehension performance. While multiple risk factors seem to be at play it appears, as hypothesized, that having lower levels of human capital may serve as the largest hindrance to the development of reading comprehension skill. The revised human capital index included measures of family occupation and education. While occupation is a measure of social status less often applied independently in educational research (Lindo, 2007), the occupation index employed was significantly predictive of comprehension

skill. However, the education index (i.e., a composite including the parents and grandparents educational levels, type of primary and secondary schools attended by respondent, whether the student had prior tutoring, and the parents rating of feelings toward and quality of their schooling) served as the strongest predictor of all of the background variables. The education index, grade, and recruitment site represented 53% of the variability in reading comprehension performance; and accounted for more variability than the education measures included in Sirin's (2005) and White's (1982) meta-analytic reviews. This is likely a result of the current study's broader education measure, use of just one comprehension assessment, and focus on elementary grades.

Although Sirin (2005) and White (1982) reported a large effect for home resources and atmosphere, these variables did not prove to be predictive in this study. Elbro and Scarborough (in press) also argued that a parent's reading ability is more predictive than their reading behavior, yet neither were predictive in this sample. The lack of significance in the predictive ability of home literacy environment (a variable whose measure focused primarily on child centered activities) and parent reading skill may be the result of the sample of struggling readers employed. Rashid et al.'s (2005) examination of home literacy environment reported parents', but not children's, literacy activities were significant in predicting the reading comprehension of their elementary students with reading disabilities.

It was also anticipated that social capital would mediate the effects of financial and human capital on reading comprehension performance. However, this was not the case. Furthermore, despite expectations, social network was not predictive of these struggling readers' performance. The revised social capital index was led primarily by

parent ratings of the importance of their child earning good academic marks and obtaining a job; and this had a negative beta coefficient. That is, those parents that reported higher ratings on these variables had students with lower reading comprehension scores once grade and site were controlled.

Surprisingly, no additional variance was accounted for by measures of parent or students' intellectual ability, sight word reading, phonemic decoding, behavior ratings or other demographics (i.e. race, gender, or age). This is likely due to the convenience sample selected. More research is needed employing a larger and more diverse sample in order to better understand these relations and the possible interactions that occur among the variables examined.

Limitations of Study

These results should be taken with caution for several reasons. The first is that this study involves a relatively small sample. The limited sample resulted in an inability to examine the reliability of the survey measures created, or include all desired variables in one regression equation. In addition, this sample is likely restricted in that the parents involved had to be able and willing to seek out this intervention and provide transportation to the university on a consistent basis.

Also at issue is that there is significant variability unaccounted for in this model. Though it was never expected that family background would account for all of the variability in reading comprehension performance, it is acknowledged that variables not measured or considered might contribute to the fit of this model. For example, the social network measure used attempts to assess network size, closure, and respondent's

satisfaction with network, but does not evaluate the density (i.e., the number of network members that know each other) of the social network, nor is the human capital of all of its members assessed. In sum, these findings may be the result of idiosyncratic features of this sample, the quality of the capital measures used, or other variables not measured. One reassurance regarding the validity of the total capital index is that it was strongly correlated with the Hollingshead, an established, albeit limited measure of social status. Another positive sign that the measures employed were valid is that the sub-constructs loaded on each other nearly as expected. It should also be reiterated that no claims of causation can be asserted given the lack of experimental data.

Implications for Research

While additional study is needed for a more detailed analysis of the capital measures, the current study does provide useful information in regards to assessing social factors. One important finding was that a student's qualification for lunch subsidy, a frequently used proxy for social status in educational research, was not predictive of reading comprehension performance. Lindo (2007) and Sirin (2005) reported similar results in their meta-analytic reviews. Conversely, measures of occupation and education were found to be predictive. However, this author found that reports of occupation can be rather difficult to accurately interpret and rank. As Hauser (1994) states a certain level of expertise is required to measure occupations well.

The current data indicates that when attempting to control for social status our purposes may be better served by collecting data on the family's educational experiences. Differences in R^2 between the education index employed (.53) in this study and the

predictive ability of the respondent's education alone (.41) suggest it is beneficial to ask more than just the parent's/respondent's education. Moreover, to do so requires minimal effort and resource. Respondents are generally more willing to discuss their educational experiences than their income level; and are more likely to know this information about other members of the familial unit.

Research has shown that parents' education influences their children's development but the question remains, is it the educational experience of parents itself, or is it something about the individuals who achieve certain levels of education that correspond to higher reading scores in their children? Unfortunately, the measures of parents' cognitive skill, parenting practices/involvement, and emotional state employed in this study did not shed any light on the situation. One plausible theory proposed by Snow et al. (1991) is that parents who have attended school for fewer years may lack the knowledge necessary to successfully assist their child's navigation through educational systems (e.g., understanding tracking, seeking and taking advantage of special programs). It is also likely that parents with higher education levels simply provide richer literacy environments for their children. Hopefully with more research we will better understand these features and be able to intervene with children and families in need.

It is important to improve our ability to identify those students most at-risk for reading difficulty, not only for their sakes, but also to better allocate the generally limited resources available to schools. The strategy of focusing on average income levels or racial groupings has not proven to be successful. Future research should incorporate a larger and more diverse sample of families; and consider increasing the breadth and depth

of the social capital items. It might also prove fruitful to collect data from the child's home and educational setting, as well as the students themselves.

Implications for Practice

Today's society requires higher literacy skills than ever before. There are fewer blue collar jobs available and a high school diploma is quickly becoming the minimum credential needed for employment. As a result, it has become a necessity for students to obtain mastery in advanced literacy skills (see discussion in Snow, 2002). Yet the National Center for Education Statistics (2005) reports 69% of fourth graders are not proficient readers. Despite society's literacy needs many students are not exposed to quality instruction, particularly those who are members of the lower socioeconomic brackets. Current legislation such as NCLB is trying to improve educational quality by calling for highly qualified instructors, early intervention, and accountability. While as a society we have committed to providing quality education to all children, we frequently fail to incorporate all of our children in the development of educational plans. Educational systems often ignore (or at least fail to explicitly address) the social cultural context in which children, particular those of economically and socially disadvantaged groups, develop.

Some argue that it is necessary to address the development of our society's underclass in order to provide universal opportunities for "optimal human development" (Gordon, 2004, 3). Given that parental literacy provides for the literacy environment of the child, I agree with Snow et al. (1991) that it may be time to for schools to consider taking an active role in developing parental literacy practices (e.g., providing books,

informing parents what children should be reading, demonstrating how to/assist children in interacting with text, and providing literacy instruction to parents in need). In an effort to address the needs of struggling readers, working to provide parents with the literacy building skills may be a step in the right direction. According to Snow et al. (1999) those parents who play a teaching role at school are most likely to carry this behavior into the home environment. Interventions in the preschool years have addressed parents, but these types of interventions are rarely enacted in the later elementary grades. However, Trotman (2001) reports that family-oriented programs involving ongoing visits to students' homes, school-based parent centers, and collaborative efforts with other community agencies have been successfully adopted in some school systems with positive results. Creative ideas of how to engage parents of children most at-risk should be an active part of every school's agenda. To that end, schools must work to make parents of all social classes and ethnic groups feel welcome and encourage them to be active members of the school community.

With the majority (60-70%) of the variability in achievement attributed to factors beyond the school house (Scheerens & Bosker, 1997) it is important that we seek a better understanding of family background factors and the role they play in academic development. Doing so may afford better tools for identifying and serving those most in need, and allow for earlier intervention in order to prevent serious reading delays.

Appendix A

Interview Monitoring Form

Interviewer: _____ Respondent #: _____ Monitor: _____

From Intro or Question # _____ Question # _____ to Question # _____ Score: _____

Interview date: _____ Feedback date: _____

- A) Introduction: Verified identity of respondent [] and that child is in intervention study []
- B) States: Name [] Purpose []
- C) Explains: Voluntary [] Confidential [] Can skip Qs [] How to answer Qs []

1. READS questions exactly as written	20 [] ALL CORRECT
Questions incorrectly asked: _____	15 [] 1-20 INCORRECT
_____	10 [] 21-40 INCORRECT
_____	0 [] MORE THAN 40
2. PROBES appropriately and in a non-directive manner	20 [] ALL CORRECT
Directive or inappropriate (cite questions and probe) _____	15 [] 1-5 INCORRECT
_____	10 [] 6-10 INCORRECT
_____	0 [] MORE THAN 10
3. FAILS to probe when necessary	20 [] NEVER
Questions number: _____	15 [] ONCE
_____	10 [] 2 OR 3 TIMES
_____	0 [] 4 OR MORE
4. SKIPS incorrectly	20 [] NEVER
Question: _____	10 [] 1 OR 2 WRONG
_____	0 [] 3 OR MORE
5. FEEDBACK: inappropriately personal/evaluative of answers	20 [] NEVER
Questions/Comments: _____	10 [] 1-2 TIMES
_____	0 [] 3+ TIMES
6. TRAINING: Explains R's role, tasks & reasons when needed	20 [] YES-WHEN NEEDED/WELL
Comments: _____	10 [] YES-BUT COULD HAVE
_____	DONE MORE/BETTER
_____	20 [] NO-NO TRAINING NEEDED
_____	0 [] NO-FAILED TO TRAIN OR
_____	DID SO POORLY
7. PACE	20 [] SLOW
_____	10 [] MEDIUM
_____	0 [] FAST

Adapted from:

Fowler, F. J., Jr., & Mangione, T. W. (1990). *Standardized survey interviewing: Minimizing interviewer-related error*. Newbury Park, CA: Sage Publications, Inc.

Appendix B

Sample Questions from WPT

The following questions are similar, but not identical, to those presented on the actual WPT and SLE forms.

Question 1 When rope is selling at \$.10 a foot, how many feet can you buy for sixty cents?

Question 2 Assume the first 2 statements are true. Is the final one:

1. True
2. False
3. Not certain

- The boy plays baseball.
- All baseball players wear hats.
- The boy wears a hat.

Question 3 Paper sells for 21 cents per pad. What will 4 pads cost?

Question 4 How many of the five pairs of items listed below are exact duplicates?

Nieman, K.M.

Neiman, K.M.

Thomas, G.K.

Thomas, C.K.

Hoff, J.P.

Hoff, J.P.

Pino, L.R.

Pina, L.R.

Warner, T.S.

Wanner, T.S.

Question 5 RESENT RESERVE—Do these words

1. Have similar meanings
2. Have contradictory meanings
3. Mean neither the same nor opposite?

Answers: 1) 6 feet 2) True 3) 84¢ 4) 1 5) 3

Source: <http://www.wonderlic.com/products/selection/wpt/sampleQuestions.asp>

Appendix C

Family Resource Survey

Thank you for agreeing to take part in this study that is looking at how family resources affect students' response to instruction. At times the questions asked may be difficult to answer or appear to be intrusive, but it is important that you respond candidly. We assure you that all information given will remain confidential. You may choose not to answer any of these questions.

Directions: Please answer each question below as completely and accurately as possible by marking the appropriate response or writing in the requested information. If you are not sure of the answer to a question please provide your best estimate or guess.

1. What is your zip code? _____ - _____
2. How long have you lived at your current address? _____
3. Do you rent or own your home? Rent Own
4. Was lead paint used in your home? Yes No
5. Please provide the age of all people living in your home and their relationship to _____.
(child in study)

Age: _____	Relationship: _____
Age: _____	Relationship: _____
Age: _____	Relationship: _____
Age: _____	Relationship: _____
Age: _____	Relationship: _____
Age: _____	Relationship: _____
Age: _____	Relationship: _____
Age: _____	Relationship: _____
Age: _____	Relationship: _____
Age: _____	Relationship: _____

6. Would you consider your home too small for your family? Yes No
7. Besides adult couples, do others share rooms in your home? Yes No
8. Altogether, how many people are dependent upon you and/or your spouse/partner? Count everyone (besides yourself and your spouse/partner) who receives one-half or more of their financial support from you or your spouse/partner. Include individuals not living with you as well. _____

Neighborhood Environment

9. Do you feel as though you are a part of your neighborhood or community, or do you think of it more as just a place to live? (MARK ONE RESPONSE) '
 - Feel a part of the neighborhood/community
 - Just a place to live

10. Are the parks or playgrounds in your neighborhood well maintained (i.e., clean, has working equipment)? Yes No No parks in neighborhood
11. Do you feel comfortable allowing your child to play outside in your neighborhood?
 Yes No
12. How would you rate your neighborhood in terms of safety for yourself and your family?
On a scale of 1 to 5, with 1=very unsafe and 5= very safe? 1 2 3 4 5
13. How many buildings in your neighborhood are boarded-up or abandoned? _____
14. How often do you see criminal activity (e.g., people getting beat-up, selling drugs, stealing, etc.) occurring in your neighborhood?
 Never Rarely Sometimes Often Always

Employment

15. Which best describes your current employment situation?
 Working Temporarily laid off
 Homemaker Unemployed
 Retired Permanently disabled
 Student Other (Please Specify) _____
16. What is your current, or last, occupation? _____
17. If working for pay, do you work at this job more than 20 hours per week? Yes No
18. How many hours do you work in the average week? Count everything, including extra jobs or paid work you do at home. ♦ _____
19. Overall, how would you rate your level of satisfaction with your current work situation?
 Not at all satisfied Somewhat satisfied Satisfied Very satisfied Extremely satisfied
20. How often do you find your job to be stressful?
 Never Rarely Sometimes Often Always
21. Overall, how would you rate the level of stress your job invokes?
 Extremely stressful Very stressful Stressful Somewhat stressful Not at all stressful
22. Please provide your occupation type (e.g., teacher, cashier) and length of time at job(s) over the last 5 years.
- | | |
|-------------------|-----------------|
| Occupation: _____ | How long? _____ |
| Occupation: _____ | How long? _____ |
| Occupation: _____ | How long? _____ |
| Occupation: _____ | How long? _____ |
| Occupation: _____ | How long? _____ |
| Occupation: _____ | How long? _____ |
| Occupation: _____ | How long? _____ |
| Occupation: _____ | How long? _____ |

23. How many times, if any, have you been unemployed in the last 5 years? _____

24. If unemployed in the last 5 years, when and how long was each period of unemployment?

Year unemployed? _____	How long? _____
Year unemployed? _____	How long? _____
Year unemployed? _____	How long? _____
Year unemployed? _____	How long? _____
Year unemployed? _____	How long? _____

If you do not have a spouse or live-in partner, skip to page 4.

25. Which best describes your spouse's or partner's current employment situation?

<input type="checkbox"/> Working	<input type="checkbox"/> Temporarily laid off
<input type="checkbox"/> Homemaker	<input type="checkbox"/> Unemployed
<input type="checkbox"/> Retired	<input type="checkbox"/> Permanently disabled
<input type="checkbox"/> Student	<input type="checkbox"/> Other (Please Specify) _____

26. What is your spouse's/partner's current occupation? _____

27. Does your spouse/partner work at this job more than 20 hours per week? Yes No N/A

28. How many hours does your spouse/partner work in the average week? Count everything, including extra jobs or paid work you do at home. ♦ _____

29. Overall, how would you rate his/her level of satisfaction with his/her work situation?
 Not at all satisfied Somewhat satisfied Satisfied Very satisfied Extremely satisfied

30. How often does he/she find his/her job to be stressful?
 Never Rarely Sometimes Often Always

31. Overall, how would he/she rate the level of stress his/her job invokes?
 Extremely stressful Very stressful Stressful Somewhat stressful Not at all stressful

32. Please provide your spouse's/partner's occupation type and length of time at job(s) over the last 5 years.

Occupation: _____	How long: _____
Occupation: _____	How long: _____
Occupation: _____	How long: _____
Occupation: _____	How long: _____
Occupation: _____	How long: _____
Occupation: _____	How long: _____
Occupation: _____	How long: _____
Occupation: _____	How long: _____
Occupation: _____	How long: _____
Occupation: _____	How long: _____

33. How many times, if any, has your spouse/partner been unemployed in the last 5 years?

34. If your spouse/partner was unemployed in the last 5 years, when and how long was each period of unemployment?

Year unemployed? _____	How long? _____
Year unemployed? _____	How long? _____
Year unemployed? _____	How long? _____
Year unemployed? _____	How long? _____
Year unemployed? _____	How long? _____

35. How would you rate your spouse's/partner's level of satisfaction with your family's financial situation? *

Not at all satisfied Somewhat satisfied Satisfied Very satisfied Extremely satisfied

36. Does anyone else in your household currently work for pay? Yes No

37. Please provide their current occupation, how long they have worked at current job, and number of hours typically worked per week:

Occupation: _____	How long: _____	Hours Worked/Week: _____
Occupation: _____	How long: _____	Hours Worked/Week: _____
Occupation: _____	How long: _____	Hours Worked/Week: _____
Occupation: _____	How long: _____	Hours Worked/Week: _____
Occupation: _____	How long: _____	Hours Worked/Week: _____
Occupation: _____	How long: _____	Hours Worked/Week: _____
Occupation: _____	How long: _____	Hours Worked/Week: _____
Occupation: _____	How long: _____	Hours Worked/Week: _____
Occupation: _____	How long: _____	Hours Worked/Week: _____
Occupation: _____	How long: _____	Hours Worked/Week: _____

Assets

We now have some questions about your household's income during the last calendar year, that is January 1-December 31, 2006. By income we mean money you received by working for someone else such as wages, a salary, commissions or tips. Also include any income received from service in the military, the military reserves or the National Guard. We appreciate that our questions are difficult to answer and sometimes seem intrusive. As with other questions in this survey, we want to reassure you that the information you provide to us is kept confidential.

38. In 2006, how much income did members of your household receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else? *

\$ _____

(If you are not sure about the amount, please mark the square below that represents your best estimate.)

<input type="checkbox"/> None	<input type="checkbox"/> \$15,001 – 20,000	<input type="checkbox"/> \$50,001-75,000
<input type="checkbox"/> \$1,000 or less	<input type="checkbox"/> \$20,001-25,000	<input type="checkbox"/> \$75,001-100,000
<input type="checkbox"/> \$1,001- 5,000	<input type="checkbox"/> \$25,001-35,000	<input type="checkbox"/> \$100,001- 200,000
<input type="checkbox"/> \$5,001- 10,000	<input type="checkbox"/> \$35,001-50,000	<input type="checkbox"/> \$200,001 or more
<input type="checkbox"/> \$10,001-15,000		

39. Excluding any income already mentioned, how much income did members of your household receive from their own farm, business, partnership, or professional practice in 2006?*

\$ _____

40. Did you, or other members of your household, receive additional income from other sources such as: (Please check source and provide the amount received in 2006)

- | | |
|---|----------|
| <input type="checkbox"/> Unemployment compensation | \$ _____ |
| <input type="checkbox"/> Disability (Workman's Compensation or Social Security) | \$ _____ |
| <input type="checkbox"/> Welfare, including aid to families with dependent children | \$ _____ |
| <input type="checkbox"/> Child support or alimony payment | \$ _____ |
| <input type="checkbox"/> Food stamps | \$ _____ |
| <input type="checkbox"/> WIC or Women Infant and Children | \$ _____ |
| <input type="checkbox"/> Interest-earning accounts (e.g., checking, saving, money market) | \$ _____ |
| <input type="checkbox"/> Pension or Retirement | \$ _____ |
| <input type="checkbox"/> Investments or rental properties | \$ _____ |
| <input type="checkbox"/> Veterans or GI benefits | \$ _____ |
| <input type="checkbox"/> Inheritances | \$ _____ |
| <input type="checkbox"/> Payment from life insurance policies | \$ _____ |
| <input type="checkbox"/> Other source of income | \$ _____ |

41. What was the total amount members of your household received from all other sources not previously listed (e.g., friends, relatives, royalties or any other regular or periodic source of income) during 2006? * \$ _____

42. Please mark the square that represents your combined household income from all sources in 2006.

- | | | |
|--|--|---|
| <input type="checkbox"/> None | <input type="checkbox"/> \$15,001 – 20,000 | <input type="checkbox"/> \$50,001-75,000 |
| <input type="checkbox"/> \$1,000 or less | <input type="checkbox"/> \$20,001-25,000 | <input type="checkbox"/> \$75,001-100,000 |
| <input type="checkbox"/> \$1,001- 5,000 | <input type="checkbox"/> \$25,001-35,000 | <input type="checkbox"/> \$100,001- 200,000 |
| <input type="checkbox"/> \$5,001- 10,000 | <input type="checkbox"/> \$35,001-50,000 | <input type="checkbox"/> \$200,001 or more |
| <input type="checkbox"/> \$10,001-15,000 | | |

43. How many wage-earners in your household contributed to this family income? _____

44. Please mark the square that represents your combined household income range when child in study was born?

- | | | |
|--|--|---|
| <input type="checkbox"/> None | <input type="checkbox"/> \$15,001 – 20,000 | <input type="checkbox"/> \$50,001-75,000 |
| <input type="checkbox"/> \$1,000 or less | <input type="checkbox"/> \$20,001-25,000 | <input type="checkbox"/> \$75,001-100,000 |
| <input type="checkbox"/> \$1,001- 5,000 | <input type="checkbox"/> \$25,001-35,000 | <input type="checkbox"/> \$100,001- 200,000 |
| <input type="checkbox"/> \$5,001- 10,000 | <input type="checkbox"/> \$35,001-50,000 | <input type="checkbox"/> \$200,001 or more |
| <input type="checkbox"/> \$10,001-15,000 | | |

45. Please mark the square that represents your combined household income range when child in study entered first grade?

- | | | |
|--|--|---|
| <input type="checkbox"/> None | <input type="checkbox"/> \$15,001 – 20,000 | <input type="checkbox"/> \$50,001-75,000 |
| <input type="checkbox"/> \$1,000 or less | <input type="checkbox"/> \$20,001-25,000 | <input type="checkbox"/> \$75,001-100,000 |
| <input type="checkbox"/> \$1,001- 5,000 | <input type="checkbox"/> \$25,001-35,000 | <input type="checkbox"/> \$100,001- 200,000 |
| <input type="checkbox"/> \$5,001- 10,000 | <input type="checkbox"/> \$35,001-50,000 | <input type="checkbox"/> \$200,001 or more |
| <input type="checkbox"/> \$10,001-15,000 | | |

46. What is the balance of your bank (i.e., checking, savings) or managed investment accounts?
\$ _____ (If you are not sure of the amount, please mark the square below
that represents your best estimate.)

- | | |
|--|--|
| <input type="checkbox"/> None | <input type="checkbox"/> \$5,001 - \$10,000 |
| <input type="checkbox"/> \$1 - \$1,000 | <input type="checkbox"/> \$10,001 - \$25,000 |
| <input type="checkbox"/> \$1,001 - \$2,500 | <input type="checkbox"/> \$25,001 - \$50,000 |
| <input type="checkbox"/> \$2,501 - \$5,000 | <input type="checkbox"/> More than \$50,000 |

47. If you or another adult has accounts established to help pay your child's or children's college education, what is the total dollar value of these accounts? * \$ _____

48. Altogether, what is the current market value of all of the vehicles (e.g., car, truck, motorcycle, boat, plane, or RVs) owned by members of your household?* \$ _____

(If you are not sure of the amount, please mark the square that represents your best estimate.)

- | | |
|--|--|
| <input type="checkbox"/> No vehicles owned | <input type="checkbox"/> \$5,001 - \$10,000 |
| <input type="checkbox"/> \$1 - \$1,000 | <input type="checkbox"/> \$10,001 - \$25,000 |
| <input type="checkbox"/> \$1,001 - \$2,500 | <input type="checkbox"/> \$25,001 - \$50,000 |
| <input type="checkbox"/> \$2,501 - \$5,000 | <input type="checkbox"/> More than \$50,000 |

49. How much is still owed on all of these vehicles?* \$ _____

50. Now we would like to get your best estimate of the value of your household furnishings including furniture, major appliances, and home electronic items. Please check your best estimate of the amount of money you would get if you were to sell all of your household furnishings? *

- | | |
|---|--|
| <input type="checkbox"/> \$1 - \$1,000 | <input type="checkbox"/> \$10,001 - \$25,000 |
| <input type="checkbox"/> \$1,001 - \$2,500 | <input type="checkbox"/> \$25,001 - \$50,000 |
| <input type="checkbox"/> \$2,501 - \$5,000 | <input type="checkbox"/> More than \$50,000 |
| <input type="checkbox"/> \$5,001 - \$10,000 | |

51. If members of your household sold all of their real estate holdings (including home, rental properties, time shares, etc.) and paid off any debts on it, how much would you get?*
\$ _____

52. If members of your household were to cash in all of their CD(s), bonds and bills how much would they get?* \$ _____

53. If members of your household sold all of their shares of stock in publicly held corporations, including mutual funds, how much would they get?* \$ _____

54. Do members of your household have any other savings or substantial assets that has not been listed above – for example, the cash value of insurance policies, future proceeds from a lawsuit or estate, assets in a trust, annuity, money owed to you by others, art work, precious metals, antiques, oil and gas leases, futures contracts, royalties or something else? *

- Yes No

What is the value of these assets? \$ _____

Expenditures

55. How would you rate your level of satisfaction with your family's financial situation? ♦
 Not at all satisfied Somewhat satisfied Satisfied Very satisfied Extremely satisfied

56. Please write the amount spent per month on the following in 2006 (January 1-December 31, 2006):

Rent or mortgage payments	\$ _____
Household utilities (e.g., electricity, gas, water, etc.)	\$ _____
Child care	\$ _____
Transportation (e.g., gas, bus fare, car note/maintenance)	\$ _____
Food and beverages	\$ _____
Household items	\$ _____
Loans or Credit card bills	\$ _____
Other Monthly Expenses	\$ _____

57. Please write the amount spent on the following in 2006:

Child(rens) schooling (tuition, uniforms, and supplies)	\$ _____
Medical costs	\$ _____
Clothing	\$ _____
Pension/Insurance	\$ _____
Other Annual Expenses	\$ _____

58. How much, if any amount, do members of your household still owe on educational loans for yourselves or your children? \$ _____

59. What is the total amount, if any, members of your household owe in other debts that have not already been listed? \$ _____

60. Would you say you have trouble paying your bills:

Always Often Sometimes Rarely Never

61. Sometimes children go through hard times. For example, they live in a place without water or electricity, or in a homeless shelter. To the best of your knowledge, has the child in this study ever experienced such hard times?* Yes No

62. How old was the child in this study when such hard times were experienced, starting from when [he/she] was born?*

63. Does the child in this study receive free or reduced lunch at school?

Free Reduced Neither

64. What school does the child in this study attend? _____

Note. Marked questions taken or adapted from *NLSY97 Round 1 Parent Questionnaire, ♦The Social Capital Community Benchmark, and ¹ Educational Longitudinal Study of 2002.

Section A: Family Composition/History

- A1. In this study we need to distinguish between birth parents, stepparents, foster or adoptive parents, guardians, other relatives and non-relatives. Are you {child's} birth [mother/father]?
YES ... (GO TO A3) ... 1 NO 0
- A2. What is your relationship to {child}? _____
- A3. Does {child} live in the same home as you do?
YES 1 NO ... (GO TO A7) 0
- A4. Since birth, has {child} always lived with you?
YES ... (GO TO A12) ... 1 NO 0
- A5. What month and year did {child} first come to live with you? _____
- A6. Who did {child} live with before [he/she] living with you? _____ (GO TO A9)
- A7. Who does {child} live with? _____
- A8. How long has {child} lived with [her/him/them]? _____
- A9. Has [he/she] lived with anyone else since birth?
YES 1 NO ... (GO TO A12) 0
- A10. Who else did {child} live with? _____
- A11. When did she live with [him/her/them]? _____
- A12. Including the month, day, and year, what is {child's} date of birth? _____
- A13. In pounds and ounces, what was {child's} weight at birth? _____
- A14. (IF RESPONDENT IS GRANDPARENT GO TO A15) Was {child} your first child?
YES ... (GO to A16) ... 1 NO 0
- A15. How old were you when you had your first child? _____
(IF "DON'T KNOW" OR NO RESPONSE): Would you say younger than 18, 18-30, over 30?
30? <18 1 18-30 2 > 30 3
- A16. How old were you when {child} was born? _____
(IF "DON'T KNOW" OR NO RESPONSE): Would you say younger than 18, 18-30, over 30?
30? <18 1 18-30 2 > 30 3
- A17. (IF RESPONDENT IS NOT BIOLOGICAL PARENT REPEAT FOR MOTHER AND FATHER) How old was {child's} birth [mother/father] when [he/she] was born?
Father: _____ Mother: _____
(IF "DON'T KNOW" OR NO RESPONSE): Would you say younger than 18, 18-30, over 30?
30? <18 1 18-30 2 > 30 3

For the following questions remember to include {child} in the total.

A18. How many children do you currently have? _____

A19. How many people lived in your home when {child} first came to live with you? _____

A20. Including {child}, how many of those people were under 18? _____

A21. How many people lived in your home when {child} entered first grade? _____

A22. Including {child}, how many of those people were under 18? _____

Now I'd like to ask a little more about your background.

A23. Including the month, day, and year, what is your date of birth? _____

A24. Were you born in the United States? YES ..(GO TO A27).. 1 NO 0

A25. What country were you born in? _____

A26. How old were you when you moved to the United States for the first time? _____

A27. Is English your primary language? YES ..(GO TO A29).. 1 NO 0

A28. What is your primary language? _____

A29. (SHOW CARD A) What race do you consider yourself?

White (Non Hispanic)..... 6	Hispanic 3
Asian American 5	American Indian 2
Black/African American (Non-Hispanic) 4	Other (specify) _____ 1

A30. Were both of your parents born in the United States?

YES ... (GO TO A32) ... 1 NO 2

A31. What country were they born in? Mother _____ Father _____

A32. (SHOW CARD A) What is your mother's race?

White (Non Hispanic)..... 6	Hispanic 3
Asian American 5	American Indian 2
Black/African American (Non-Hispanic) 4	Other (specify) _____ 1

A33. (SHOW CARD A) What is your father's race?

White (Non Hispanic)..... 6	Hispanic 3
Asian American 5	American Indian 2
Black/African American (Non-Hispanic) 4	Other (specify) _____ 1

A34. What year was your mother born? _____

A35. What year was your father born? _____

A36. Did you live with both birth parents from birth to age 16?

YES ... (GO TO A38) 1 NO 0

A37. Who did you live with? _____

A38. Including half- or step- siblings, how many brothers and sisters do you have? _____

Now I'd like to get some background on {child's} [father/mother]

A39. Including the month, day, and year, what is {child's} [father/mother] date of birth? _____

A40. Was [he/she] born in the United States? YES ..(GO TO A43).. 1 NO 0

A41. What country was [he/she] born in? _____

A42. How old was [he/she] when [he/she] moved to the United States for the first time? _____
(IF "DON'T KNOW" OR NO RESPONSE): Would you say younger than 18, 18-30, over
30? <18 1 18-30 2 > 30 3

A43. (SHOW CARD A) What race is {child's} [father/mother]?
White (Non Hispanic)..... 6 Hispanic 3
Asian American 5 American Indian 2
Black/African American (Non-Hispanic) 4 Other (specify) _____ 1

A44. Is English [his/her] primary language? YES ..(GO TO A46).. 1 NO 0

A45. What is [his/her] primary language? _____

A46. Were [his/her] parents born in the United States?
YES ... (GO TO A48) ... 1 NO 0

A47. What country were they born in? Mother _____ Father _____

A48. What year was [his/her] mother born? _____

A49. What year was [his/her] father born? _____

A50. (SHOW CARD A) What is [his/her] mother's race?
White (Non Hispanic)..... 6 Hispanic 3
Asian American 5 American Indian 2
Black/African American (Non-Hispanic) 4 Other (specify) _____ 1

A51. (SHOW CARD A) What is [his/her] father's race?
White (Non Hispanic)..... 6 Hispanic 3
Asian American 5 American Indian 2
Black/African American (Non-Hispanic) 4 Other (specify) _____ 1

A52. Did [he/she] live with both birth parents from birth to age 16? _____
YES(GO TO A54) 1 NO 0

A53. Who did [he/she] live with? _____

(IF RESPONDENT IS CHILD'S BIRTH PARENT, GO TO A69, PAGE 6).

Now I'd like to get some background on {child's} birth [father/mother/parents].

A54. Including the month, day, and year, what is {child's} birth [father's/mother's/parents'] date(s) of birth? Father: _____ Mother: _____

A55. [Was/Were] {child's} birth [father/mother/parents] born in the United States?
 Father: YES . (GO TO A58) . 1 NO 0 DK . (GO TO A58)
 Mother: YES . (GO TO A58) . 1 NO 0 DK . (GO TO A58)

A56. What country [was/were] [he/she/they] born in? Father: _____ Mother: _____

A57. How old [was/were] [he/she/they] when [he/she/they] moved to the United States for the first time? Father _____ Mother: _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say younger than 18, 18-30, over 30?
 Father: <18 . . 1 18-30 . . 2 > 30 . . 3 Mother: <18 . . 1 18-30 . . 2 > 30 . . 3

A58. (SHOW CARD A) What race is {child's} birth [father/mother/parents]? F: ____ M: ____
 White (Non Hispanic) 6 Hispanic 3
 Asian American 5 American Indian 2
 Black/African American (Non-Hispanic) 4 Other (specify) _____ 1

A59. Is English [his/her/their] primary language?
 Father: YES . (GO TO A61) . 1 NO 0 DK . (GO TO A61)
 Mother: YES . (GO TO A61) . 1 NO 0 DK . (GO TO A61)

A60. What is [his/her/their] primary language? Father: _____ Mother: _____

A61. Were [his/her/their] parents born in the United States?
 Father: YES . (GO TO A63) . 1 NO 0 DK . (GO TO A63)
 Mother: YES . (GO TO A63) . 1 NO 0 DK . (GO TO A63)

A62. What country were they born in? Father: _____ Mother: _____

A63. What year [was/were] [his/her/their] mother(s) born? Father: _____ Mother: _____

A64. What year [was/were] [his/her/their] father(s) born? Father: _____ Mother: _____

A65. (SHOW CARD A) What is [his/her/their] mother's race? Father: _____ Mother: ____
 White (Non Hispanic) 6 Hispanic 3
 Asian American 5 American Indian 2
 Black/African American (Non-Hispanic) 4 Other (specify) _____ 1

A66. (SHOW CARD A) What is [his/her/their] father's race? Father: _____ Mother: ____
 White (Non Hispanic) 6 Hispanic 3
 Asian American 5 American Indian 2
 Black/African American (Non-Hispanic) 4 Other (specify) _____ 1

A67. Did [he/she/they] live with both birth parents from birth to age 16? _____
 Father: YES . (GO TO A69) . 1 NO 0 DK . (GO TO A69)
 Mother: YES . (GO TO A69) . 1 NO 0 DK . (GO TO A69)

A68. Who did [he/she] live with? _____

I would now like to ask some questions about your marital status and relationships with {child's} [father/mother]. (IF RESPONDENT NOT BIRTH PARENT START WITH A76)

- A69. (SHOW CARD B) Which best describes your relationship with {child's} [father/mother]?
- Never married (GO TO A76) 0
 - Living as married 4
 - Married (GO TO A71) 5
 - Separated (i.e., legally married, but not together) . . . (GO TO A72) 3
 - Divorced (GO TO A73) 2
 - Widowed (GO TO A74) 1

A70. How long have you been living as married? _____ (GO TO A86)

A71. How long [were you/have you been] married? _____ (GO TO A86)

A72. How long have you been separated? _____ (GO TO A83)

A73. How long have you been divorced? _____ (GO TO A76)

A74. How long have you been a widow? _____

A75. (SHOW CARD C) Before [his/her] death, how often did {child} have contact with [his/her] [father/mother]? (GO TO A80)

- | | |
|--|------------------------------|
| Never 0 | Every other week 5 |
| One to three times a year 1 | 1-3 days a week 6 |
| Four to six times a year 2 | 4-6 days a week 7 |
| Seven to eleven times a year 3 | Daily 8 |
| Monthly 4 | |

A76. (SHOW CARD B) What is the current marital status of {child's} [father/mother]?

- Never-married (GO TO A78) 0
- Living as married 4
- Married 5
- Separated (i.e., legally married, but not together) . . . (GO TO A78) 3
- Divorced (GO TO A78) 2
- Widowed (GO TO A78) 1

A77. (SHOW CARD D) How would you describe {child's} relationship with this [stepparent/parent's partner]?

-1.....2.....3.....4.....5.....
- | | | | | |
|------------|------------------|-------------------|-----------------|----------|
| Unfriendly | More unfriendly, | Neither friendly, | More friendly, | Friendly |
| | than friendly | nor unfriendly | than unfriendly | |

(IF RESPONDENT IS CHILD'S MOTHER OR FATHER GO TO A80)

A78. (SHOW CARD B) What is the marital status of {child's} [father/mother]?

- Never-married (GO TO A80) 0
- Living as married 4
- Married 5
- Separated (i.e., legally married, but not together) . . . (GO TO A80) 3
- Divorced (GO TO A80) 2
- Widowed (GO TO A80) 1

A79. (SHOW CARD D) How would you describe {child's} relationship with this [stepparent/parent's partner]?

.....1.....2.....3.....4.....5.....

Unfriendly More unfriendly, Neither friendly, More friendly, Friendly
than friendly nor unfriendly nor unfriendly than unfriendly

A80. (SHOW CARD B) Which of these categories best describes your current marital status?

Never-married (GO TO A83) 0
Living as married 4
Married 5
Separated (i.e., legally married, but not together) 3
Divorced (GO TO A83) 2
Widowed (GO TO A83) 1

A81. Is your [husband/wife/partner] living in the same home as {child's}?

YES 1 NO 0

A82. (SHOW CARD D) How would you describe {child's} relationship with your [husband/wife/partner]?

.....1.....2.....3.....4.....5.....

Unfriendly More unfriendly, Neither friendly, More friendly, Friendly
than friendly nor unfriendly nor unfriendly than unfriendly

A83. (SHOW CARD C) Which best describes how often you have spoken with {child's} [father/mother] either in person or over the phone in the last 12 months? _____

Never 0 Every other week 5
One to three times a year 1 1-3 days a week 6
Four to six times a year 2 4-6 days a week 7
Seven to eleven times a year ... 3 Daily 8
Monthly 4

A84. (SHOW CARD C) Which best describes how frequently {child} communicates with [his/her] [father/mother]?

Never 0 Every other week 5
One to three times a year 1 1-3 days a week 6
Four to six times a year 2 4-6 days a week 7
Seven to eleven times a year ... 3 Daily 8
Monthly 4

A85. In a typical month, how many days does {child} stay at [his/her][father's/mother's] home? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say never, one to five days, six to ten days, eleven to fifteen days, or more than fifteen days?

Never ... 0 one-five ... 1 six-ten ... 2 eleven-fifteen ... 3 > fifteen ... 4

A86. (SHOW CARD E) To what extent [does/did] {child's} [father/mother] participate in decisions about [his/her] education (e.g., about where [he/she] goes to school or what activities [he/she] participates in)?¹

.....1.....2.....3.....4.....5.....

Never Rarely Sometimes Often Always

A87. (SHOW CARD E) How often [does/did] {child's} [father/mother] attend meetings (e.g., open house, PTA or PTO meetings)?¹

....1.....2.....3.....4.....5....
Never Rarely Sometimes Often Always

A88. (SHOW CARD D) Would you [describe/have described] {child's} relationship with [his/her] [father/mother] as . . . (READ OPTIONS)

.....1.....2.....3.....4.....5....
Unfriendly More unfriendly, Neither friendly, More friendly, Friendly
 than friendly nor unfriendly than unfriendly

A89. (SHOW CARD D) Would you [describe/have described] your relationship with {child's} [father/mother] as . . . (READ OPTIONS)

.....1.....2.....3.....4.....5....
Unfriendly More unfriendly, Neither friendly, More friendly, Friendly
 than friendly nor unfriendly than unfriendly

(IF RESPONDENT IS CHILD'S MOTHER OR FATHER GO TO B1.)

A90. (SHOW CARD C) Which best describes how often you have spoken with {child's} [father/mother] either in person or over the phone in the last 12 months? _____

Never	0	Every other week	5
One to three times a year	1	1-3 days a week	6
Four to six times a year	2	4-6 days a week	7
Seven to eleven times a year	3	Daily	8
Monthly	4		

A91. (SHOW CARD C) Which best describes how frequently {child} communicates with [his/her] [father/mother]?

Never	0	Every other week	5
One to three times a year	1	1-3 days a week	6
Four to six times a year	2	4-6 days a week	7
Seven to eleven times a year	3	Daily	8
Monthly	4		

A92. In a typical month, how many days does {child} stay at [his/her][father's/mother's] home? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say never, one to five days, six to ten days, eleven to fifteen days, or more than fifteen days?

Never . . . 0 one-five . . . 1 six-ten . . . 2 eleven-fifteen . . . 3 > fifteen . . . 4

A93. (SHOW CARD E) To what extent [does/did] {child's} [father/mother] participate in decisions about [his/her] education (e.g., about where [he/she] goes to school or what activities [he/she] participates in)?¹

....1.....2.....3.....4.....5....
Never Rarely Sometimes Often Always

A94. (SHOW CARD E) How often [does/did] {child's} [father/mother] attend meetings (e.g., open house, PTA or PTO meetings)?¹

....1.....2.....3.....4.....5....
Never Rarely Sometimes Often Always

A95. (SHOW CARD D) Would you [describe/have described] {child's} relationship with [his/her] [father/mother] as . . . (READ OPTIONS)				
.....1.....	.....2.....	.....3.....	.....4.....	.....5.....
Unfriendly	More unfriendly, than friendly	Neither friendly, nor unfriendly	More friendly, than unfriendly	Friendly
A96. (SHOW CARD D) Would you [describe/have described] your relationship with {child's} [father/mother] as . . . (READ OPTIONS)				
.....1.....	.....2.....	.....3.....	.....4.....	.....5.....
Unfriendly	More unfriendly, than friendly	Neither friendly, nor unfriendly	More friendly, than unfriendly	Friendly

Section B: Family Health

Now I'd like to ask you some questions about your family's health.

B1. (SHOW CARD F) In general, would you describe your health as . . . (READ OPTIONS)

...1.....	.....2.....	.....3.....	.....4.....	.....5.....
Poor	Fair	Good	Very Good	Excellent

B2. Have you ever had any serious medical conditions, such as severe heart problems, cancer, diabetes, or other potentially life-threatening disease?

YES 0 NO 1

B3. Do you have any health problems or conditions that limit the type or amount of employment you can accept?

YES 0 NO 1

B4. Have you ever been diagnosed, that is been told by your school or a doctor, as having a learning, emotional, or behavioral problem such as, a learning disability, attention deficit disorder, or emotional/behavioral disorder?

YES 0 NO . . . (GO TO B6) 1

B5. What was your diagnosis? _____

B6. Has {child's} birth [father/mother] ever been diagnosed as having a learning, emotional, or behavioral problem such as, a learning disability, attention deficit disorder, or emotional/behavioral disorder?

YES 0 NO . . . (GO TO B8) 1

B7. What was [his/her] diagnosis? _____

B8. Has anyone else in your family ever been diagnosed as having a learning, emotional, or behavioral problem?

YES 0 NO . . . (GO TO B10) 1

B9. Please tell me their relationship to {child} and what the diagnosis was?

Relationship: _____	Diagnosis: _____
Relationship: _____	Diagnosis: _____
Relationship: _____	Diagnosis: _____

B10. (SHOW CARD F) Now I'd like to ask you some questions about {child}'s general state of health. In general, how is [his/her] health?*

...1.....2.....3.....4.....5....
Poor Fair Good Very Good Excellent

B11. Does {child} get a yearly check up with a doctor?

YES 1 NO 0

B12. How often has {child} seen a doctor, including visits to the dentist, eye doctor, or emergency room, over the last 12 months? _____

B13. Does {child} now have or has [he/she] ever had any chronic health condition or life threatening disease such as asthma, diabetes, epilepsy, heart condition, or cancer?*

YES 0 NO ... (GO TO B16) 1

B14. What chronic health conditions or diseases has {child} been diagnosed as having?

B15. How old was {child} when the [chronic health problem/ threatening disease] was first noticed?*

B16. Has {child} ever had any physical or mental conditions that have limited [his/her] ability to attend school regularly or do regular school work?*

YES 0 NO ... (GO TO B19) 1

B17. What conditions is [he/she] diagnosed as having? _____

B18. (SHOW CARD G) Which best describes how {child's} physical or mental health condition impacts [his/her] participation in school or other youth activities (e.g., playing with friends, little league)? Participation is limited . . .

....1.....2.....3.....4.....5....
Always Often Sometimes Rarely Never

B19. Has {child} ever displayed a learning, emotional, or behavioral problem that has made it more difficult for [him/her] to do school work or take part in other activities.

YES 0 NO ... (GO to B24) 1

B20. How old was {child} when [he/she] first showed signs of having a learning, emotional, or behavioral difficulties? _____

B21. Is {child} diagnosed as having a learning disability?

YES 0 NO 1

B22. Is {child} diagnosed as having attention deficit disorder or attention deficit hyperactivity disorder?

YES 0 NO 1

B23. Is {child} diagnosed as having emotional or behavior problems?

YES 0 NO 1

B24. Is {child} diagnosed as having any other conditions or disabilities?
YES 0 NO ... (GO TO B26) 1

B25. What other conditions or disabilities is [he/she] diagnosed are having? _____

B26. Does {child} regularly take any medicine or prescription drugs related to a diagnosed condition?
YES 0 NO ... (GO TO B28) 1

B27. What condition is [he/she] taking medication for? _____

B28. Are there any other persons over 18 in your household that have health problems or conditions that limit the type or amount of employment they can accept?
YES 0 NO 1

B29. Are there any other persons in your home that have serious medical condition(s), such as severe heart problems, cancer, diabetes, or other potentially life-threatening disease?
YES 0 NO ... (GO TO B31) 1

B30. How are these individuals related to {child} and what are their conditions?
Who: _____ Condition: _____
Who: _____ Condition: _____
Who: _____ Condition: _____
Who: _____ Condition: _____

B31. Are you responsible for the care of any relatives outside of your household that have serious medical condition(s), such as severe heart problems, cancer, diabetes, or other potentially life-threatening disease?
YES 0 NO 1

B32. (SHOW CARD H) Would you consider your family's health conditions to be ... (READ OPTIONS)
.....1.....2.....3.....4.....5....
Extremely Very Stressful Somewhat Not very
Stressful Stressful Stressful Stressful

Section C: Social Networks

Now I would like to ask some questions regarding your community. Let's begin with your friends.

C1. We consider close friends to be people you are not related to, but who you feel at ease with, can talk to about private matters, or call on for help. ♦ Do you have any close friends?
YES 1 NO ... (GO TO C5) 0

C2. How many close friends do you have? _____
(IF "DON'T KNOW" OR NO RESPONSE): Would you say that you have one to three, four to six, seven to nine, or more than nine close friends?
one-three ... 1 four-six ... 2 seven-nine ... 3 > nine ... 4

- C13. Do you have a family member that would spend a lot of time helping you if were experiencing a household emergency?
 YES 1 NO ... (GO TO C15) 0
- C14. How many family members could you count on to spend a lot of time helping you? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, one to three, four to six, seven to nine, or more than nine?
 none .. 0 one-three ... 1 four-six ... 2 seven-nine ... 3 > nine ... 4
- C15. Do you have a family member that you could ask for and receive several hundred dollars from if needed?
 YES 1 NO ... (GO TO C17) 0
- C16. How many family members could you count on to provide you with several hundred dollars if needed? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, one to three, four to six, seven to nine, or more than nine?
 none .. 0 one-three ... 1 four-six ... 2 seven-nine ... 3 > nine ... 4
- C17. In the last five years have you, or someone living with you, spent a lot of time helping either a relative or friend in an emergency?^s
 YES 0 NO 1
- C18. In the last five years have you, or another adult in your home, helped a friend or relative in an emergency by giving or loaning them several hundred dollars or more?^s
 YES 0 NO 1
- C19. In the last five years have you needed and received any amount, such as several hundred dollars, from either a friend or relative?^s
 YES 1 NO 0
- C20. In the last five years has either a friend or a relative spent a lot of time helping you in an emergency?^s
 YES 1 NO 0
- C21. (SHOW CARD I) Overall, how satisfied are you with the support you receive from your friends? (READ OPTIONS)
1.....2.....3.....4.....5.....
 Not satisfied Somewhat satisfied Satisfied Very satisfied Extremely Satisfied
- C22. (SHOW CARD I) Overall, how satisfied are you with the support you receive from your relatives? (READ OPTIONS)
1.....2.....3.....4.....5.....
 Not satisfied Somewhat satisfied Satisfied Very satisfied Extremely Satisfied
- C23. (SHOW CARD J) While people often mean well, sometimes their attempts to help are rather bothersome (e.g., they give unwanted advise or interfere). Overall, would you rate your relatives or friends support to be bothersome?
1.....2.....3.....4.....5.....
 Always Usually Sometimes Rarely Never
 Bothersome Bothersome Bothersome Bothersome Bothersome

C24. Next, I have a few questions about your IMMEDIATE NEIGHBORS. These are the 10 or 20 households that live closest to you. ♦ Do you know the names of any of your immediate neighbors?

YES 1 NO 0

C25. (SHOW CARD C) About how often do you talk, more than simply saying hello, to your immediate neighbors? ♦

Never 0	Every other week 5
One to three times a year 1	1-3 days a week 6
Four to six times a year 2	4-6 days a week 7
Seven to eleven times a year 3	Daily 8
Monthly 4	

C26. (SHOW CARD C) About how often do you visit the home of your immediate neighbors? ♦

Never 0	Every other week 5
One to three times a year 1	1-3 days a week 6
Four to six times a year 2	4-6 days a week 7
Seven to eleven times a year 3	Daily 8
Monthly 4	

C27. Next, I'd like you to think about all the different places {child} has lived. By places we mean each house, apartment, or other type of residence even if they were all in the same neighborhood or city. How many different places total, has {child} lived, from birth until [his/her] last birthday?* _____ (IF "DON'T KNOW" OR NO RESPONSE):

Would you say one or two, three to four, five to six or more than six places?
 one-two . . . 1 three-four . . . 2 five-six . . . 3 > six . . . 4

C28. How many cities has [he/she] lived in? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say one or two, three to four, five to six or more than six cities?

one-two . . . 1 three-four . . . 2 five-six . . . 3 > six . . . 4

Now let's discuss {child's} relationships.

C29. Does {child} make friends easily?

YES 1 NO 0

C30. How many close friends does {child} have? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say that you have 1-3, 4-6, 7-9, or 10 or more close friends?

None... 0 one-three ... 1 four-six ... 2 seven-nine ...3 ten + ... 4

C31. (SHOW CARD K) Would you say you know none, a couple, a few, some, most, or all of {child's} friends?

..0.....	1.....	2.....	3.....	4.....	5...
None	Couple	Few	Some	Most	All

C32. (SHOW CARD K) Would you say you know none, a couple, a few, some, most, or all of the parents of {child's} friends?

..0.....	1.....	2.....	3.....	4.....	5...
None	Couple	Few	Some	Most	All

(GO TO C34)

C33. Would you consider any of these parents to be your friends?
 YES 1 NO 0

C34. Sometimes kids spend a lot of time with other adults besides their parents. For example, they may spend time with a relative or parent of a friend after school or on weekends. Does {child} spend time with adults besides [his/her] parents and school teachers?
 YES 1 NO ... (GO TO C36) 0

C35. Please provide the title (e.g., grandmother, friend, coach) of the adult or adults {child} spends time with, and how many hours per week [he/she] spends with them?

Title: _____	Hours spent: _____
Title: _____	Hours spent: _____
Title: _____	Hours spent: _____
Title: _____	Hours spent: _____
Title: _____	Hours spent: _____

Now I'm going to ask you about your participation in various types of groups and organizations.

C36. (SHOW CARD L) Excluding weddings and funerals, how often do you attend worship service (like church, synagogue service, or mass)?

Never. 0	About once a week. 5
Once or twice a year. 1	About twice a week. 6
Less than once a month. . . 2	Several times a week. 7
About once a month. 3	Everyday. 8
About twice a month. . . . 4	

C37. Please answer yes if you have been involved with this type of group in the last 12 months, and no if you have not.

- Church groups Y N
- Social or fraternal organizations (e.g. Lions Club, sorority/fraternity, alumni group, or Local women's club)? Y N
- Unions or professional organizations? Y N
- Charity or service organizations Y N
- Social action groups such as the National Organization for Women, the NAACP, or the Mexican American Legal Defense? Y N
- Public interest groups or political groups/parties Y N
- Neighborhood group, like a homeowners, tenant, or block association Y N
- Parent teacher association or other school service group? Y N
- Youth organizations (e.g., little league, boy/girl scouts, 4-H)? Y N
- Other hobby or interest groups (e.g., book or gardening club; study, discussion or musical group) Y N
- Support or self-help group for individuals with, or who have family members with, certain problems or illnesses. Y N

C38. Do you belong to any other types of groups, clubs, or organizations? Y N

C39. Have you served on any committees or been an officer for any of the groups you have been involved in? Y N

C40. Has {child} been involved in any youth organizations (e.g., youth sports league, boy or girl scouts, 4-H)?
 YES 1 NO . . . (GO TO C42) 0

C41. What groups has [he/she] been involved in? _____

C42. Thinking about your own life, are there any obstacles or barriers that make it difficult for you to be as involved with your community as you would like? ♦
 YES 0 NO . . . (GO TO C44) 1

C43. (SHOW CARD G) I'd like you to tell me whether each of the following is never (5), rarely (4), sometimes(3), often (2), or always (1) an obstacle.

Your work schedule	5	4	3	2	1
Childcare	5	4	3	2	1
Transportation	5	4	3	2	1
Feeling unwelcome	5	4	3	2	1
Concerns for your safety	5	4	3	2	1
Lack of information or not knowing how to begin	5	4	3	2	1
Feeling that you can't make a difference	5	4	3	2	1

Parent Aspirations/Expectations

C44. Now I'd like you to rate the importance of the following events from 0-10 with 0=not important and 10=extremely important. {child} . . .

Earns good grades in academic areas	0	1	2	3	4	5	6	7	8	9	10
Gets good marks for behavior	0	1	2	3	4	5	6	7	8	9	10
Finishes high school	0	1	2	3	4	5	6	7	8	9	10
Gets a job	0	1	2	3	4	5	6	7	8	9	10
Goes to college	0	1	2	3	4	5	6	7	8	9	10
Earns a four-year degree	0	1	2	3	4	5	6	7	8	9	10
Goes to graduate or professional school	0	1	2	3	4	5	6	7	8	9	10
Owns [his/her] own home	0	1	2	3	4	5	6	7	8	9	10

C45. Now, I want you to rate the likelihood of the following events occurring on a scale of 0-10 with 0=extremely unlikely and 10=certain to occur. {Child} will . . .

Receive a high school diploma.	0	1	2	3	4	5	6	7	8	9	10
Have a baby by age 18	0	1	2	3	4	5	6	7	8	9	10
Go to vocational or jr. college.	0	1	2	3	4	5	6	7	8	9	10
Earn a four-year college degree	0	1	2	3	4	5	6	7	8	9	10
Earn a graduate or professional degree	0	1	2	3	4	5	6	7	8	9	10
Serve jail time by age 20	0	1	2	3	4	5	6	7	8	9	10
Work more than 20 hrs/wk for pay by age 30	0	1	2	3	4	5	6	7	8	9	10

C46. Have you or another of {child's} parents set aside money for [his/her] education after high school?¹
 YES 1 NO ... (GO TO D1) 0

C47. (SHOW CARD M) What has been done to prepare for {child's} education after high school?¹ (READ OPTIONS)
 a. Started a savings account
 b. Bought an insurance policy
 c. Bought U.S. savings bonds
 d. Made investments in stocks or real estate
 e. Set up a college investment fund (such as a mutual fund)
 f. Established another form of savings
 g. Participated in a state-sponsored college savings program
 h. Other (Please Specify): _____

Section D: Educational/Occupational Resources

I would now like to discuss the educational experiences of {child's} adult relatives.

D1. (SHOW CARD N) What is the highest level of education you have obtained?
 Less than 7th grade 1
 Less than 9th grade 2
 Junior high school (9th grade) 3
 Some high school (10-11th grade) 4
 High school diploma (including GED) 5
 Some college, but degree not obtained 6
 Vocational or Specialized Training degree (One year degree) 7
 Associate degree (Two year Degree) 8
 Bachelor's degree (Four year Degree) 9
 Some graduate school 10
 Graduate/Professional degree 11

D2. What is your occupation? _____

D3. (SHOW CARD N) What is the highest level of education {child's} [father/mother] has obtained?
 Less than 7th grade 1
 Less than 9th grade 2
 Junior high school (9th grade) 3
 Some high school (10-11th grade) 4
 High school diploma (including GED) 5
 Some college, but degree not obtained 6
 Vocational or Specialized Training degree (One year degree) 7
 Associate degree (Two year Degree) 8
 Bachelor's degree (Four year Degree) 9
 Some graduate school 10
 Graduate/Professional degree 11

D4. What is {child's} [father's/mother's] occupation? _____

(IF RESPONDENT IS BIRTH PARENT, GO TO D5.)

D4a. (SHOW CARD N) What is the highest level of education {child's} birth mother has obtained?

- Less than 7th grade 1
- Less than 9th grade 2
- Junior high school (9th grade) 3
- Some high school (10-11th grade) 4
- High school diploma (including GED) 5
- Some college, but degree not obtained 6
- Vocational or Specialized Training degree (One year degree) 7
- Associate degree (Two year Degree) 8
- Bachelor's degree (Four year Degree) 9
- Some graduate school 10
- Graduate/Professional degree 11

D4b. What is {child's} birth mother's occupation? _____

D4c. (SHOW CARD N) What is the highest level of education {child's} birth father has obtained?

- Less than 7th grade 1
- Less than 9th grade 2
- Junior high school (9th grade) 3
- Some high school (10-11th grade) 4
- High school diploma (including GED) 5
- Some college, but degree not obtained 6
- Vocational or Specialized Training degree (One year degree) 7
- Associate degree (Two year Degree) 8
- Bachelor's degree (Four year Degree) 9
- Some graduate school 10
- Graduate/Professional degree 11

D4d. What is {child's} birth father's occupation? _____

(IF RESPONDENT IS NOT PARTNERED OR MARRIED TO SOMEONE OTHER THAN BIRTH PARENT, GO TO D7.)

D5. (SHOW CARD N) What is the highest level of education your [spouse/partner] has obtained?

- Less than 7th grade 1
- Less than 9th grade 2
- Junior high school (9th grade) 3
- Some high school (10-11th grade) 4
- High school diploma (including GED) 5
- Some college, but degree not obtained 6
- Vocational or Specialized Training degree (One year degree) 7
- Associate degree (Two year Degree) 8
- Bachelor's degree (Four year Degree) 9
- Some graduate school 10
- Graduate/Professional degree 11

D6. What is your [spouse's/partner's] occupation? _____

D7. (SHOW CARD N) What is the highest level of education obtained by your mother?

Less than 7 th grade	1
Less than 9 th grade	2
Junior high school (9 th grade)	3
Some high school (10-11 th grade)	4
High school diploma (including GED)	5
Some college, but degree not obtained	6
Vocational or Specialized Training degree (One year degree)	7
Associate degree (Two year Degree)	8
Bachelor's degree (Four year Degree)	9
Some graduate school.	10
Graduate/Professional degree.	11

D8. What was your mother's occupation? _____

D9. (SHOW CARD N) What is the highest level of education obtained your father?

Less than 7 th grade	1
Less than 9 th grade	2
Junior high school (9 th grade)	3
Some high school (10-11 th grade)	4
High school diploma (including GED)	5
Some college, but degree not obtained	6
Vocational or Specialized Training degree (One year degree)	7
Associate degree (Two year Degree)	8
Bachelor's degree (Four year Degree)	9
Some graduate school.	10
Graduate/Professional degree.	11

D10. What was your father's occupation? _____

D11. (SHOW CARD N) What is the highest level of education {child's} grandmother on [his/her] [father's/mother's] side has obtained?

Less than 7 th grade	1
Less than 9 th grade	2
Junior high school (9 th grade)	3
Some high school (10-11 th grade)	4
High school diploma (including GED)	5
Some college, but degree not obtained	6
Vocational or Specialized Training degree (One year degree)	7
Associate degree (Two year Degree)	8
Bachelor's degree (Four year Degree)	9
Some graduate school.	10
Graduate/Professional degree.	11

D12. What was the occupation of {child's} grandmother on [his/her] [father's/mother's] side?

D13. (SHOW CARD N) What is the highest level of education {child's} grandfather on [his/her] [father's/mother's] side has obtained?

- Less than 7th grade 1
- Less than 9th grade 2
- Junior high school (9th grade) 3
- Some high school (10-11th grade) 4
- High school diploma (including GED) 5
- Some college, but degree not obtained 6
- Vocational or Specialized Training degree (One year degree) 7
- Associate degree (Two year Degree) 8
- Bachelor's degree (Four year Degree) 9
- Some graduate school. 10
- Graduate/Professional degree. 11

D14. What was the occupation of {child's} grandfather on [his/her] [father's/mother's] side?

D15. Would you describe the schools you attended for grades kindergarten to 12 (or last grade completed before 12th) as public, private, or both?

- Public . . (GO TO D17) . . 1 Private 3 Both 2

D16. Did your private school have a religious affiliation?

- YES 1 NO 0

D17. Did the schools you attended for grades kindergarten to 12 (or last grade completed before 12th) have a student population that is predominately white, racially mixed, predominately Hispanic, or predominantly black?

- White 4 Mixed 3 Hispanic 2 Black 1

D18. How would you rate the overall quality of your kindergarten to 12 (or last grade completed before 12th) education on a scale of 0 to 10 with 0= poor and 10=excellent?

- 0 1 2 3 4 5 6 7 8 9 10

D19. How would you rate your feelings toward school on a scale of 0-10, with 0=did not enjoy and 10=really enjoyed?

- 0 1 2 3 4 5 6 7 8 9 10

Now let's discuss {child's} childcare and educational experiences.

D20. We'll begin with childcare, which we define as any care given by someone OTHER THAN A PARENT. Childcare includes care by relatives, babysitters, and nannies. It also includes time when the child attends daycare centers or preschools. During {child}'s FIRST year of life, did [he/she] ever spend twenty or more hours a week in childcare?*

- YES 0 NO 1

D21. From ages 1-4, did {child} ever spend twenty or more hours a week in childcare?*

- YES 0 NO . . . (GO TO D24) 1

D22. Did this childcare occur at a home, daycare center, or preschool? (SELECT ALL THAT APPLY)

- Home . . (GO TO D24). . 1 Daycare Center 2 Preschool 3

- D23. (SHOW CARD E) To what extent did the daycare or preschool {child} attended teach academic skills?
1.....2.....3.....4.....5....
 Never Rarely Sometimes Often Always
- D24. Did {child} attend kindergarten? YES 1 NO ..(GO TO D27).. 2
- D25. Was kindergarten full day or half day? Full day 2 Half day 1
- D26. How old was {child} when [he/she] entered kindergarten? _____
- D27. How old was {child} when [he/she] entered first grade? _____
- D28. How old was {child} when [he/she] entered second grade? _____
- D29. Since the first grade, other than school vacations, did {child} ever miss four or more weeks of school? YES 0 NO ... (GO TO D32) 1
- D30. How many weeks did {child} miss? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say 4-6 weeks, 7-9 weeks, or more than 9 weeks? 4-6 wks . . . 0 7-9 wks . . . -1 >9 wks . . . -2
- D31. What grade or grades was {child} in when this happened? _____
- D32. Since first grade, how many schools has {child} attended, consider home schooling as a school? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say 1, 2-3, more than 3? one . . . 1 two-three . . . 2 >three . . . 3
- D33. Has {child} ever repeated a grade? YES 0 NO ..(GO TO D35).. 1
- D34. Which grade or grades has [he/she] repeated? _____
- D35. Has {child} ever skipped a grade? YES 1 NO ..(GO TO D37).. 0
- D36. Which grade or grades has [he/she] skipped? _____
- D37. What grade is {child} in currently? _____
- D38. Does {child} currently attend a public, private, or home school?
 Public . (GO TO D40) . 1 Private . . . 2 Home School .(GO TO D40) . 3
- D39. Does {child's} private school have a religious affiliation?
 YES 1 NO 0
- D40. How many students are in {child's} class? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say less than 10, 10-15, 15-20, or more than 20? <10 . . 4 10-15 . . 3 15-20 . . 2 >20 . . 1
- D41. Does {child's} school have a student population that is predominately white, racially mixed, predominately Hispanic, or predominantly black?
 White 4 Mixed 3 Hispanic 2 Black 1

- D42. How would you rate the overall quality of the education {child} is receiving on a scale of 0 to 10 with 0=poor and 10=excellent? 0 1 2 3 4 5 6 7 8 9 10
- D43. How would you rate {child's} feelings toward school on a scale of 0-10, with 0=does not enjoy and 10=really enjoys? 0 1 2 3 4 5 6 7 8 9 10
- D44. Rate how {child} is doing in school, academically, on a scale of 0-10, with 0= extremely poor and 10=extremely well? 0 1 2 3 4 5 6 7 8 9 10
- D45. Rate the following on a scale of 0-10 with 0=never and 10=always: {child} . . .
- gets in trouble at school 0 1 2 3 4 5 6 7 8 9 10
 - has problems focusing 0 1 2 3 4 5 6 7 8 9 10
 - gets along with others 0 1 2 3 4 5 6 7 8 9 10
 - is happy 0 1 2 3 4 5 6 7 8 9 10
- D46. When {child} gets home from school is an adult or older child there to supervise [him/her]?
 YES 1 NO . . . (GO TO D49) 0
- D47. Which is [he/she] supervised by, an adult or older child?
 Adult . . . (GO TO D49) 2 Child 1
- D48. How old is the child who is watching over {child} after school? _____
- D49. Does {child} participate in any after school programs, such as those sponsored by the school, YMCA, or neighborhood community centers?
 YES 1 NO . . . (GO TO D52) 0
- D50. Does {child} participate in these after school programs less than once a week, one or two times a week, three to four times a week, or five days a week?
 <one 1 one-two 2 three-four 3 five 4
- D51. Do these programs provide homework help or teach academic skills?
 YES 1 NO 0
- D52. Do you, or another adult in the home, help {child} with [his/her] homework?
 YES 1 NO 0
- D53. Do you, or another adult in the home, check to ensure {child} has completed [his/her] homework?
 YES 1 NO 0
- D54. Since {child} started the first grade, has [he/she] ever received tutoring after school or during school breaks, excluding the tutoring [he/she] is receiving related to this study?
 YES 1 NO 0
- D55. Does {child} participate in any other after school or weekend instruction, such as music or ballet lessons?
 YES 1 NO 0

Now let's discuss other learning and family activities.

D56. Has {child} traveled to other states? YES 1 NO . .(GO TO D58).. 0

D57. How many states has [he/she] visited? _____
(IF "DON'T KNOW" OR NO RESPONSE): Would you say one or two, three to four, five to six, or more than six?
one-two . . . 1 three-four. . . 2 five-six . . . 3 > six . . . 4

D58. Has {child} traveled to other countries? YES 1 NO . .(GO TO D60).. 0

D59. How many countries has [he/she] visited? _____
(IF "DON'T KNOW" OR NO RESPONSE): Would you say one or two, three to four, five to six, or more than six?
one-two . . . 1 three-four. . . 2 five-six . . . 3 > six . . . 4

Now, lets discuss the activities and routines that occur in your home.

D60. Do members of your family eat dinner together?
YES 1 NO . . . (GO TO D62) 0

D61. Which best describes how often your family eats dinner together: rarely, once or twice a week, 3-4 days a week, or 5-7 days a week?
Rarely. . 1 1-2 days/week . . 2 3-4 days/week . . 3 5-7 days/week . . 4

D62. (SHOW CARD G) Which best describes how often {child} listens to the radio while eating dinner?
.....1.....2.....3.....4.....5.....
Always Often Sometimes Rarely Never

D63. (SHOW CARD G) Which best describes how often {child} watches television while eating dinner?
.....1.....2.....3.....4.....5.....
Always Often Sometimes Rarely Never

D64. How many hours per day does {child} watch television, including videos, Monday through Friday? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, less than an hour, one or two, three to four, five or more hours?
None . . 5 <1hr . . 4 1-2hrs. . 3 3-4hrs. . 2 5+hrs. . 1

D65. How many hours per day does {child} watch television, including videos, on Saturday and Sunday? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, less than an hour, one or two, three to four, five or more hours?
None . . 5 <1hr . . 4 1-2hrs. . 3 3-4hrs. . 2 5+hrs. . 1

D66. Does {child} have a television in [his/her] bedroom?
YES 0 NO 1

D67. Do you or another adult in the household monitor what {child} watches on television or video?
YES 1 NO 0 N/A

D68. Do you or another adult in the household monitor what {child} listens to on the radio or CD?

YES 1 NO 0 N/A

D69. Does {child} have a computer in [his/her] home?

YES 1 NO ... (GO TO D71) 0

D70. Is {child's} use of the computer monitored?

YES 1 NO 0 N/A

D71. Does {child} play video or computer games?

YES 1 NO ... (GO TO D76) 0

D72. How many hours per day does {child} play video or computer games, Monday through Friday? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, less than an hour, one or two, three to four, five or more hours?

None ..5 <1hr .. 4 1-2hrs. . 3 3-4hrs. . 2 5+hrs. .1

D73. How many hours per day does {child} play computer or video games, on Saturday and Sunday? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, less than an hour, one or two, three to four, five or more hours?

None ..5 <1hr .. 4 1-2hrs. . 3 3-4hrs. . 2 5+hrs. .1

D74. Are the computer or video games played mostly for entertainment or education?

Entertainment1 Education .. (GO TO D76) .. 3 Both 2

D75. What types of computer or video games, for example sports or card games, does {child} like to play? _____

D76. Kids like to do different activities such as watch TV, play board games, draw, or read. What does {child} like to do during [his/her] free time? _____

Home Literacy Environment

Now I'd like to discuss your family's literacy activities.

D77. Does {child} visit the public library?

YES 1 NO ... (GO TO D80) 0

D78. (SHOW CARD O) On average, how often does [he/she] visit the public library?

Once or twice a year. 1 About once a week.5
Less than once a month. . .2 Several times a week6
About once a month 3 Everyday.7
About twice a month. 4

D79. (SHOW CARD E) Does {child} never, rarely, sometimes, often, or always bring books home from the library when [he/she] visits?

....1.....2.....3.....4.....5....
Never Rarely Sometimes Often Always

- D80. How many books of any kind are in {child's} home? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, 1-20, 21-40, 41-60, 61-80 or more than 80? 0...0 1-20...1 21-40...2 41-60...3 61-80...4 >80...5
- D81. How many children's books are in {child's} home? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, 1-20, 21-40, 41-60, 61-80 or more than 80? 0...0 1-20...1 21-40...2 41-60...3 61-80...4 >80...5
- D82. How many, if any, adult magazine subscriptions (e.g., Time, People, Sports Illustrated, or Ebony) come to {child's} home? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, 1-3, 4-6, 7-9, or more than 10? None...0 1-3...1 4-6...2 7-9...3 10+...4
- D83. How many, if any, children magazine subscriptions come to your home? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, 1-3, 4-6, 7-9, or more than 10? None...0 1-3...1 4-6...2 7-9...3 10+...4
- D84. How many, if any, newspaper subscriptions come to your home? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, 1, 2, 3, or more than 3? None...0 1...1 2...2 3...3 >3...4
- D85. (SHOW CARD L) How frequently, if ever, does your family read together? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say ...
 Never...0 About once a week...5
 Once or twice a year...1 About twice a week...6
 Less than once a month...2 Several times a week...7
 About once a month...3 Everyday...8
 About twice a month...4
- D86. Did you, or another adult in your home read books to {child} when [he/she] was younger?
 YES...1 NO... (GO TO D93) ...0
- D87. (SHOW CARD E) Would you say you or another adult, never, rarely, sometimes, often, or always, talked (e.g., ask questions or provide explanations) about what was happening in the stories read?
1.....2.....3.....4.....5....
 Never Rarely Sometimes Often Always
- D88. What age was {child} when you, or another adult, began reading stories to [him/her]?
 _____ (IF "DON'T KNOW" OR NO RESPONSE): Would you say less than 12 months, 12-24 months, 25 months to 3 years, or more than 3 years old?
 <12 months...4 12-24 Months...3 25 mths-3 yrs...2 >3 yrs...1
- D89. Back then, how many different books were read in a typical reading episode? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say 1, 2, or 3 or more?
- D90. In a typical week, how many stories were read to {child}? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say 1 or 2, 3-5, 6-10, or more than 10? 1-2...1 3-5...2 6-10...3 >10...4

- D91. Did you or another adult read the same stories to {child} multiple times?
 YES 1 NO 0
- D92. In an average week how often did {child} ask to have books read to [him/her]? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say never, 1-2 times a week, 3-4
 times a week, 5-6 times a week or everyday?
 Never .. 0 1-2/Week .. 1 3-4/week .. 2 5-6/week .. 3 Everyday .. 4
- D93. At what age did {child} begin to read [himself/herself]? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say [he/she] was younger than 5,
 5 or 6, 7 or older? <five ... 3 five or six ... 2 seven or older ... 1
- D94. (SHOW CARD E) Would you say {child} never, rarely, sometimes, often or always reads
 for pleasure?
1.....2.....3.....4.....5....
 Never Rarely Sometimes Often Always
- D95. How many books per month do you read for pleasure? _____
 (IF "DON'T KNOW" OR NO RESPONSE): Would you say none, 1-2, 3-4, 5-6, 7 or
 more? None ... 0 1-2 ... 1 3-4 ... 2 5-6 ... 3 7+ ... 4
- D96. Are you currently reading a book for pleasure?
 YES 1 NO ... (GO TO D98) 2
- D97. What is the title? _____
- D98. Who is your favorite author? _____
- D99. (SHOW CARD E) Would you say {child} sees you reading a book for pleasure ...
1.....2.....3.....4.....5....
 Never Rarely Sometimes Often Always
- D100. How many books per month are read for pleasure by other adults, if any, in your
 household? _____ (IF "DON'T KNOW" OR NO RESPONSE): Would
 you say none, 1-2, 3-4, 5-6, 7 or more?
 None ... 0 1-2 ... 1 3-4 ... 2 5-6 ... 3 7+ ... 4
- D101. How many magazines or journals per month are read for pleasure by you or other adults in
 your household? _____ (IF "DON'T KNOW" OR NO RESPONSE):
 Would you say none, 1-2, 3-4, 5-6, 7 or more?
 None ... 0 1-2 ... 1 3-4 ... 2 5-6 ... 3 7+ ... 4
- D102. (SHOW CARD C) Which describes how often you or other adults in your household read
 the newspapers? _____
 Never 0 Every other week 5
 One to three times a year 1 1-3 days a week 6
 Four to six times a year 2 4-6 days a week 7
 Seven to eleven times a year 3 Daily 8
 Monthly 4

Parental Involvement

D103. (SHOW CARD E) Now I'd like to ask you how frequently you or other adults are involved in certain activities with {child}. Which best describes the frequency you or another adult . . .

	1	2	3	4	5
	Never	Rarely	Sometimes	Often	Always
➤ Take {child} to places such as museums, zoos or historic sites	1	2	3	4	5
➤ Provide {child} with learning materials (videos, workbooks, etc.)	1	2	3	4	5
➤ Ensure {child} has a place for school and other learning materials	1	2	3	4	5
➤ Make sure {child} keeps a regular morning and bedtime routine	1	2	3	4	5
➤ Work on academic skills (i.e., reading, writing, or math) with {child}	1	2	3	4	5
➤ Do creative activities such as crafts or projects with {child}	1	2	3	4	5
➤ Discuss {child's} learning to friends or family.	1	2	3	4	5
➤ Discuss {child's} learning with [his/her] teacher	1	2	3	4	5
➤ Attend parent teacher conferences	1	2	3	4	5
➤ Request materials from teacher to practice at home	1	2	3	4	5
➤ Volunteers at {child's} school	1	2	3	4	5
➤ Go on field trips with {child's} class	1	2	3	4	5
➤ Participate in other activities at {child's} school.	1	2	3	4	5

CLOSING: (READ TO RESPONDENT) This concludes our interview. I'd like to thank you again for participating in this study. Your answers will help us better understand the impact of family resources on students' response to instruction. We assure you that the information you have given will remain confidential.

Note. Marked questions taken or adapted from *NLSY97 Round 1 Parent Questionnaire, ⁵Panel Study of Income Dynamics, 1980, [•]The Social Capital Community Benchmark, and ¹ Educational Longitudinal Study of 2002.

INTERVIEWER REMARKS (TO BE COMPLETED AFTER INTERVIEW)

(Adapted from NLSY97 Round 1 Parent Questionnaire)

On a scale of 0 to 10, where 0 is uncooperative/uninformative, 5 is neutral and 10 is very cooperative and informative, rate the quality of the parent interview.

0 1 2 3 4 5 6 7 8 9 10

On a scale of 0 to 10, where 0 is hostile, 5 is neutral and 10 is friendly, what was the parents attitude toward the interview?

0 1 2 3 4 5 6 7 8 9 10

In general, what was the parent's understanding of the questions?

Poor 1 Fair 2 Good 3

Did the parent have any special circumstances that affected his/her ability to answer any portion of the survey? (SELECT ALL THAT APPLY.)

- | | |
|---|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Difficulty hearing |
| <input type="checkbox"/> Difficulty understanding the questions | <input type="checkbox"/> Unable to see well |
| <input type="checkbox"/> Environmental distractions | <input type="checkbox"/> Illness or injury |
| <input type="checkbox"/> Poor command of English | <input type="checkbox"/> Under the influence of alcohol or drugs |
| <input type="checkbox"/> Other (SPECIFY): _____ | |

Was anyone else present during any portion of the parent interview, not just walking through the area where the interview was being administered, but listening in or taking part in the interview itself?

YES 1 NO 2

Who was present? (SELECT ALL THAT APPLY.)

- | | |
|---|---|
| <input type="checkbox"/> Parent | <input type="checkbox"/> Other relative |
| <input type="checkbox"/> Children | <input type="checkbox"/> Friend |
| <input type="checkbox"/> Other (SPECIFY): _____ | |

Where was the parent interview conducted? _____

Did you have any problems conducting this interview?

YES 1 NO 2

Describe the problem: _____

Appendix E

Mapping of Items by Family Background Construct

<i>Construct</i>	<i>Wonderlic</i>	<i>TOWRE</i>	<i>CES-D</i>	<i>PSI</i>	<i>PDI</i>	<i>Social Network</i>	<i>FRS</i>	<i>FBS</i>
Social Capital -resources such as time and individuals, available for intellectual tasks; relations between children and parents/family.								
Social Network (Closure, credit slips, inform. flow, community involvement/relations)						All	2, 9	A77, A79, A83-A85, A88-A92, A95, A96, C1-C43
Family/Household Composition/Marital Status							5	A1-A12, A14-A22, A36-A38, A52-A53, A69-A74, A76-A78, A80
Parental aspirations/expectations								C44, C45
Parenting Practices/Involvement					All			A86, A87, A93, A94, C46, D46-D48, D52, D53, D67, D68, D70, D103d,g,h,i,k-m
Human Capital -approximated by parental education; provides potential for a cognitive environment that aids child's learning.								
Education (level, across generations, quality, racial comp., features)								D1, D3, D4a, D4c, D5, D7, D9, D11, D13, D15-D44, D49-D51, D54, D55
Occupation							16, 22, 26, 32-34, 37	D2, D4, D4b, D4d, D6, D8, D10, D12, D14
Home Literary Environment								D56-102, D103 b, c, e, f, j
Cognitive/Reading ability	All	All						

Financial Capital -approximated measure of family wealth or income; Provision of physical resources that can aid in achievement.								
Wealth (Assets-Expenditures)							3	C47
Income (all in home)							38-54, 56-59	
Poverty (threshold, persistence, neighborhood/housing conditions)							1, 6-8, 10-14, 40, 60-62	A13
Employment (length, stability)							15, 17, 18, 22-25, 27, 28, 36, 37	
Possible Mediators								
Race (child, parents)								A24-A33, A40-A47, A50- A51, A55-A62, A65-A66
Behavior ratings (parent)								D45
Parental depression			All					
Parental/Family stress				All			19-21, 29-31, 35, 55	B1-B32
Variables from larger study: Child's Full Scale IQ, Phonological Skills, Social Skills Rating, gender								

Appendix F

Description of Computation Procedures for Capital Indexes (Full Model)

Index	Formula*
Human Capital	Sum of (Education / 4), (Occupation / 4), (Home Literacy Environment / 4), (Cognitive/Reading Ability / 4)
Education	Sum of average of parent and grandparents educational level (D1+ D3 + average of D7, D9, D11, D13), D15-19, D23, D32r, D33, D38, D40r-D45, D49-D55.
Occupation	Sum of average parent occupation (D2, D4) and average of grandparents occupation (D8, D10, D12, D13)
Home Literacy Environment	Sum of D57r, D59r, D61, D63, FBD66, FBD69, ranking of hours watching television over week (D64, D65), ranking of hours playing video/computer games over week (D72, D73), D74, D77-102, D103, D103b, F103c, D103e, D103f, D103j
Cognitive/Reading Ability	Sum of parent TOWRE & WPT
Social Capital	Sum of (Social Network / 4), (Family Composition / 4), (Parent involvement and practices / 4), (Parent aspirations and expectations / 4)
Social Network	Sum of Social Network Survey score, rating for years lived in current residence, rating for whether respondent feels neighborhood is a community or just a place to live, A77, A79, A82-A85r, A88-A92, A95, A96, C2r-C4r, C6r, C8r-C12r, C14r, C16r-C26, C27r, C28r, C29, C30r, C31-C34, C36-C37a-j, C39, C40, C42
Family Composition	Sum of adult to child ratio, child's birth order, A4, A16b, A17, A36, A52, A69, A76
Parent Aspirations/Expectations	Sum of C44, C44a-g, C45a-f.
Parent Practices/Involvement	Sum of PDI score, A86, A87, C46, D103d, D103g, D103h, D103i, D103k, D103l, D103m.

Financial Capital	Sum of (Wealth / 4), (Income / 4), (Poverty / 4), (Employment / 4)
Wealth	Sum of range for household wealth (assets-expenditures), neighborhood wealth (calculated by deducting the zip codes average household expenditure from the median household income in that zip code according to www.realestate.yahoo.com), whether respondent rents (0) or owns (1) home, number of items reported in C47.
Income	Sum of neighborhood income range, household income range for calendar year prior to interview, household income range when child was born, household income range when child entered grade 1
Poverty	Sum of responses to questions 6, 7, 9-11, 12, 14, 60, 63 on FRS (1 point for answers relating to increased capital), A13 (1 point if weight above 5lbs. 5 oz.), and 1 point if family does not meet poverty threshold (calculated based on the US Census criterion).
Employment	Sum of ranking of 15 and 26, 17 and 27 (1 for yes), 18 and 28 (1 point for 40 hrs or less), and number of jobs respondent, spouse and/or others in household held in last 5 years (2 = 1 job, 1 = 2 jobs, 0 = 3+ jobs each), others in household work part time (1pt) or full time (2pts).

Note. *Letter number sequence represents question number in Family Background Survey. Range value for item was used for items in which an r follows the item number.

Appendix G

Description of Computation Procedures for Capital Indexes (Revised Model)

Index	Formula*
Human Capital	Sum of (Education / 2), (Occupation / 2)
Education	Sum of average of parent and grandparents educational level (D1+ D3 + average of D7, D9, D11, D13), Type of school respondent attended (D15), Respondents rating of quality of schooling (D18), Rating of respondents feelings toward school (D19), Whether student has received additional tutoring (D54).
Occupation	Sum of average parent occupation (D2, D4) and average of grandparents occupation (D8, D10, D12, D13)
Social Capital	Sum of (Social Network / 2), (Parent aspirations and expectations / 2)
Social Network	Sum of number of friends the respondent can count on to spend a lot of time helping her/him (C6r), number of relatives the respondent sees at least once a month (C11r), number of cities child in study has lived in (C28r)
Parent Aspirations/Expectations	Sum of ratings of the importance of the child in study earning good grades in academic areas (C44) & importance of the child in study getting a job (C44c)
Financial Capital	Sum of (Wealth / 3), (Income / 3), (Employment / 3)
Wealth	Range for neighborhood wealth (calculated by deducting the zip codes average household expenditure from the median household income in that zip code according to www.realestate.yahoo.com)
Income	Neighborhood income range (based on zip code)
Employment	Number of others in household employed (37).

Note. Indexes recalculated to include only those items with significant zero-order correlations with reading comprehension. *Letter number sequence represents question number in Family Background Survey. Range value for item was used for items in which an r follows the item number.

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