

PREDICTORS OF LITERACY PRACTICES IN RURAL AFRICAN AMERICAN  
FAMILIES

Naa Dede Awula Addy

A thesis submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Masters of Arts in the School of Education.

Chapel Hill  
2011

Approved by:

Dr. Lynne Vernon-Feagans

Dr. Rebecca New

Dr. Dana Griffin

## **ABSTRACT**

NAA DEDE AWULA ADDY: Predictors of Literacy Practices in Rural African American Families  
(Under the direction of Dr. Lynne Vernon-Feagans)

The current study examines the nature of literacy practices in rural African American families. Hierarchical regression analyses are used to examine a number of demographic variables and their possible influence of the frequency of literacy practices in these families. Specifically, this study examines maternal, child, and household structure variables and their relation to child, joint mother-child, and maternal literacy practices. In contrast to many prior studies of low-income minority families, results reveal that these families are frequently engaged in a variety of literacy practices and that children's language skills are on target for their age. Furthermore, maternal employment and child language skills are found to be predictive of child literacy practices, while maternal education and child language skills are predictive of joint literacy practices. Markers of socioeconomic status are not predictive of literacy practices in this sample. The study concludes with a discussion of implications and directions for future research.

*Keywords:* family literacy practices, African Americans, early literacy

## TABLE OF CONTENTS

LIST OF TABLES.....	iv
Introduction.....	1
Literacy Practices.....	8
Predictors of Literacy Practices.....	12
Maternal Characteristics.....	12
Child Characteristics.....	15
Household Structure.....	16
Methods.....	17
Participants.....	17
Predictor Variables.....	22
Maternal Characteristics.....	22
Child Characteristics.....	23
Household Structure.....	24
Outcome Variables.....	24
Analysis.....	28
Results.....	28
Discussion.....	41
Child Literacy Practices.....	41
Joint Literacy Practices.....	44
Maternal Literacy Practices.....	45

Conclusions and Implications.....	45
Limitations and Future Research.....	47
References.....	51

## LIST OF TABLES

### Table

1. Predictor Variables at child age = 24 months.....	20
2. Mean Scores on the Family Activities Questionnaire.....	28
3. Most frequent family literacy practices at child age = 24 months.....	29
4. Most frequent family literacy practices at child age = 36 months.....	29
5. Literacy Practices at child age = 24 months.....	32
6. Literacy Practices at child age = 36 months.....	33
7. Hierarchical Regression Analysis Predicting Child Literacy Practices.....	38
8. Hierarchical Regression Analysis Predicting Joint Literacy Practices.....	39
9. Hierarchical Regression Analysis Predicting Maternal Literacy Practices.....	40

## **Introduction**

In the United States today, a young child's ability to read serves as an indicator of that child's potential for success in elementary school as well as acting as a predictor of general academic success through middle and high school (Diamond, Gerde, & Powell, 2008; Poe, Burchinal, & Roberts, 2004; Snow, Burns, & Griffin, 1998). For this reason, many kindergarten and even preschool classrooms have shifted from a focus on play-based learning to a focus on early literacy skills (Diamond et al., 2008, Graue, 2010). Graue (2010) also mentions that many of today's kindergarten classrooms appear similar to first grade classrooms of past decades. Children in this current academic climate are expected to possess increasingly advanced literacy skills at progressively younger ages. Similarly, a bulk of research has been directed towards the study of children's literate experiences prior to formal school entry. Numerous studies have examined demographic variables of families with young children, such as socioeconomic status (SES), parental education, and the quality of the home environment and the potential impact of these variables on future literacy skills (Raikes, et al., 2006; Roberts, Jurgens, & Burchinal, 2005; Scarborough & Dobrich, 1994; Snow, Burns & Griffin, 1998, Teale 1986). Results suggest that children from higher SES backgrounds, those whose parents are more highly educated, and those with more responsive and supporting home environments tend to exhibit better language and literacy skills in school.

Research also indicates that the types and frequency of educational activities in which young children participate (or do not participate) influence their literacy performance in school

(Bradley, Corwyn, McAddo, & García Coll, 2001; Bus, van Ijzendoorn, & Pellegrini, 1995; S n chal & LeFevre, 2002) Researchers have examined a number of different activities that appear to influence school literacy skills. Of particular interest are literacy activities that occur at bedtime, in religious settings such as churches, and during play with peers (Heath, 1983; Vernon-Feagans, 1996; Purcell-Gates, 1996). Findings suggests that while there may be some literacy activities in early childhood that are fairly common throughout American families, cultural and class differences may exist as well (Heath, 1983; Purcell-Gates, 1996; Vernon-Feagans, 1996). For instance, research on family and community literacy practices has focused most heavily on shared storybook reading between parents and their children. The practice of reading storybooks together is normative in many North American families (Bradley et al., 2001) and has been linked with later language and educational outcomes (Bus, van Ijzendoorn, & Pellegrini, 1995; Snow, Burns, & Griffin, 1998; but see also Scarborough & Dobrich, 1994 for a critique). However, these research finding have been based primarily on White, middle-class families.

In the past two decades, research has emerged to suggest that low-income families, and ethnic minorities, primarily of African-American and Hispanic origin, engage in book-reading practices less frequently than middle-income or White families (Heath, 1983; Raikes et al, 2006). Various explanations have been put forth, ranging from culturally defined views regarding its relative importance, to familiarity with the English language, to the availability of financial resources to devote to child literacy materials in the home. If observed differences are due to variations in cultural definitions of literacy, there is no reason to assume any deficiency on the part of low-income or minority communities compared to White, middle-class families. Instead, differences in literacy practices between these communities may be related to different

expectations regarding the role of literacy and differing beliefs about how literacy learning does and should occur (Hammer & Weiss, 2000; Qualls, 2001). In other words, these differences in the frequency of shared storybook reading may be an indication of difference rather than deficit.

Fortunately, more recent studies approach literacy from broader cultural perspectives and examine a variety of literacy practices rather than focusing solely on shared storybook reading. Additionally, there are many efforts to understand the literacy practices of particular communities in their local contexts rather than defining them solely in comparison to White middle-class norms (Bloome et al, 2001; Heath, 1983; Taylor & Dorsey-Gaines, 1998; Vernon-Feagans, 1996). For instance, several studies have documented the prominent role of oral language and literacy within the African American community. Rather than spending substantial amounts of time with storybooks, African American families often prefer to create and tell stories aloud (Heath, 1983; Ward, 1971). The ability to create fictionalized narratives is a common and highly valued activity. Observational research in two rural, Southern communities reveals the importance of storytelling in the Black communities (Heath, 1983; Vernon-Feagans, 1996). Vernon-Feagans (1996) find that young Black boys prior to school entry are particularly adept at this skill. Along with their storytelling abilities, these boys exhibit larger vocabularies compared to Black girls as well as White boys and girls.

As research indicates, stories within the Black communities are conceptualized not so much as narratives within books, but as oral accounts that jointly created. Stories are also meant to be fictionalized and elaborated, rather than necessarily representing a “true” or literal representation of reality. This stance towards stories contrasts with conceptualizations of narratives in White communities, where more emphasis is placed on accuracy and factuality, as well as on written narrative such as in children’s storybooks (Heath, 1983).

In addition to this line of research which documents the nature of literacy along racial or ethnic lines, multiple studies also reveal a wide range of literacy practices *within* particular ethnic and/or social class groups. Hammer and Weiss (2000) report differences in how middle- and low-income African American mothers structure their infant's early learning experiences based on differing beliefs in child development, but also find differences within these two groups as well. Hammer and Weiss note the difficulty in making generalizations along class-line in their sample of twelve families, based on the varied nature of their findings.

Purcell-Gates (1996) and Teale (1986) also find a great deal of variability in the frequency and format of literacy practices within low-SES homes. In her study of 24 children between the ages of 4 and 6 years, Purcell-Gates (1996) reports that families engaged in literacy practices at an average rate of .76 literate events per hour. However, total literacy practices ranged from as little as .17 per hour to as much 5.07 per hour. Similarly, one household in the study was reported to contain approximately 100 children's books, a number of writing materials, work-related literature, and several posters with print. In contrast, another household reportedly contained no children's books, very few writing materials, and few instances of print other than environmental print such as that on food labels. Teale (1986) similarly, reports a wide range of literate practices in the homes of low-income families, ranging from reading the Bible, communicating with community service agencies through print, and reading magazines. Clearly, making broad generalizations about literacy practices within any given community or population is unlikely to provide a comprehensive or highly accurate picture of the nature of those practices.

Being aware of the pitfalls of overgeneralization, the current study examines family characteristics and their relation to literacy practices within rural, low-income African American

families. Certainly a degree of variability exists in this sample as well. Nevertheless, the aim of this project is to contribute to the body of knowledge concerning literacy practices in American families generally. The project was guided by two main questions:

1. What are the literacy practices of rural African Americans mothers and their young children at 24 and 36 months of age?
2. How are maternal characteristics, child characteristics, and household structure variables when children are 24 months of age related to the literacy practices of mothers and children one year later (when children are 36 months of age)?

Before proceeding with details of the current study, however, it is necessary to define the terms literacy and literacy practices. Literacy traditionally refers to the ability to decode, represent, and understand orthographic symbols or in other words, to the ability to read and write. Involved in the ability to read and write are component skills of phonological awareness (for the sounds of oral language), vocabulary, fluency, and comprehension. However, a broader definition of literacy includes a wider range of skills than an individual's ability to decode orthographic symbols and connect them to the sounds of language (Bloome, Champion, Katz, Morton, & Muldrow, 2001; Qualls, 2001). Drawing from socio-cultural perspectives and the work of James Gee (1989), literacy is more comprehensively defined as a cultural practice of using language, primarily in written form. The definition of literacy as a practice captures its dynamic nature. Rather than existing in static form, literacy serves as a practice that is constantly changing and adapting. Furthermore, as a practice that is culturally based, literacy takes different forms and meanings in different cultural settings based on the needs and expectations of members of the cultural community in which it exists.

Within the context of this particular study, literacy is defined as a dynamic socio-cultural practice of using language orally and in print, that is defined in different ways depending on the culture in which it exists. Literacy practices, therefore, describe the particular ways in which language, primarily in written form, is used between and among individuals and groups for social and cultural purposes. In sum, literacy practices are socially established and shared ways of using written language with a specific type or set of events” (Bloome, Champion, Katz, Morton, & Muldrow, 2001). A sociocultural conceptualization of literacy and literacy practices more appropriately captures the range of both oral and print literacy practices in African American communities than more traditional, solely print-based definitions. For this reason, the current study examines not only print-based literacy practices, but also incorporates oral traditions such as reciting nursery rhymes and telling stories.

Bloome and colleagues (2000), based on the model first described by Street and Street (1991), also define two types of literacy practices; school literacy practices and family/community literacy practices. School literacy practices, or those that have been “pedagogized,” refer to uses of written language that are undertaken primarily to display the skill and competence of the user rather than to accomplish a purpose such as communication, entertainment, or personal expression. Family and community literacy practices, on the other hand, refer to a broader range of uses of written language that are intended to accomplish cultural life (Taylor & Dorsey-Gaines, 1988). The distinction refers more to the structuring of language and the social relationships among people rather than to a differentiation based on location. By focusing on literacy practices occurring between family members in relatively naturalistic settings, the current study focuses primarily on family/community literacy practices as opposed to school literacy practices.

Much of the research on family literacy practices focuses on literacy practices that are shared between parents and children. Shared storybook reading represents an example of a shared or joint literacy practice. Studies of family literacy also examine activities in which children alone engage, such as pretending to write, and how these types of activities impact literacy skills. Less attention is devoted to the study of literacy practices that incidentally involved children. But in addition to engaging children in literacy, families also participate in literacy practices that may not directly involve children. For instance, children may observe their parents reading for pleasure or writing grocery lists. Children may therefore see literacy being used around them and learn important aspects about the purposes of reading and writing from these observations (Sulzby & Teale, 1991). According to Purcell-Gates (1996), “by living and participating in an environment in which others use print for various purposes, children infer the semiotic and functional nature of written language”.

This process of observational learning describes what Gee (1989) refers to as literacy acquisition. In his words, literacy acquisition is a subconscious process involving natural and meaningful exposure. Moreover, Gee (1989) argues that literacy acquisition tends to lead to a greater mastery than formal, explicit literacy instruction. Nevertheless, both informal exposure and direct involvement in literacy practices contribute to a child’s literate knowledge. For this reason, the current project examines informal literacy practices such as reciting nursery rhymes as well as more explicit practices such as teaching the alphabet. Additionally, literacy practices in which parents alone engage are also included in the current project, based on the understanding that children’s overall literacy experiences involve observations of literacy being used around them.

Before continuing, it should be also noted that the term African-American in this review of literature refers to a heterogeneous group of people, rather than referring to a homogeneous or clearly defined population. All families included in this project self-identify their race and the race of their children. Nevertheless, the term African American includes families of differing socioeconomic backgrounds who come from a number of different cultural backgrounds (for instance native-born American Blacks, immigrants from Africa and the Caribbean) and who engage in a wide variety of cultural practices. However, the current analysis can only examine similarities and differences among these populations to the extent that the current research differentiates between them. In general, the term African American will be used in this paper to refer to people of African descent residing in the United States, who are born and reside in the United States. Furthermore, the terms Black and African American are used interchangeably.

### **Literacy Practices**

Both Heath (1983) and Teale (1986) in their studies of low-income African American families, find that the most frequent literacy activities in the home are associated with practical aspects of everyday life. Heath refers to this domain of literacy activities as “instrumental use” while Teale prefers to term “daily living routines”. However, both scholars include literacy for activities such as obtaining food and cooking, other shopping, paying bills, traveling and reading street signs, and maintaining organization of the home in this domain. In studying Black, White, and Latino families when children were between 2.5 and 3.5 years of age, Teale (1986) finds that literacy activities in this domain account for about 25% of all literacy activities. More recent work by Purcell-Gates (1996) mirrors these findings, though with slightly older children. Her study of 20 low-income households, 10 of which were African-

American included 24 children between the ages of 4 and 6 years. Results indicate that these families used literacy most often for daily living routines, with just over 32% of all literacy activities falling into this category. Although they examine literacy practices in slightly different samples, these studies all report that literacy is used most often for the maintenance of daily life. In addition, this similarity in findings extends across both urban (Purcell-Gates, 1996; Teale, 1986) and rural (Heath, 1983) low-income African American families.

After daily living routines, literacy appears to be used in African American families most frequently for entertainment or recreational purposes. Heath (1983), Teale (1986), and Purcell-Gates (1996) all find entertainment to be the second most frequent domain of literacy activities in African American families. This domain includes practices such as reading novels, newspapers, and magazines, reading print on the television, making lists and plans, or researching other entertainment activities for the family (such as parks, movies, and community events). Teale (1986) reports that entertainment uses of literacy account for nearly 24% of all literacy practices and Purcell-Gates reports similar frequencies at nearly 26%. Teale makes the distinction between three types of literacy for entertainment: 1) literacy as the *source* of entertainment itself – such as reading a book, 2) literacy as *instrumental* to the entertaining activity – as in finding out about an entertaining activity, and 3) literacy as *incidental* to the activity – as in seeing print on a television show. In reporting percentages, however, Teale (1986) collapses all three types under the domain of literacy for entertainment. Heath (1983) also reports that recreational uses of literacy are the second most frequent domain of literacy used in African American families with young children. It should be noted, however, that she also includes social-interactional uses of literacy in this domain, which could potentially inflate its frequency in comparison to the findings of Teale and Purcell-Gates.

The third most frequent domain of literacy practices in African American families with young children, according to both Teale (1986) and Purcell-Gates (1996), is literacy for the explicit purpose of teaching literacy. Included in this domain may be activities such as practicing writing the alphabet and the child's name, practicing reading simple words and so forth. The main goal of such practices is to teach the child to read and write. Teale (1986), reports that approximately 20% of all literacy practices fall under this domain, while Purcell-Gates (1996) reports only 9% fall under this domain. The reasons for this discrepancy are unclear, but it is evident that of all the literacy practices mentioned so far, this domain most directly involves both parents and children.

Another important domain of literacy practices in African American families with young children involves school-related uses. Teale (1986) reports approximately 11% of all literacy practices fall under this domain and Purcell-Gates (1996) reports about 12%. Both studies include practices such as communicating with teachers and school administrators via letters and newsletters, playing school, and doing homework or take-home lessons in this domain. While this domain of literacy is often included in previous research, it does not readily apply to the current study and therefore will not be discussed here in detail.

Literacy in many families is also often used to communicate with family, friends, or others who are distanced by time or space. The same is true of the African American families with young children. This type of communication may involve reading or writing letters, sending cards, reading community announcements, and even oral storytelling. In more modern times, reading and writing emails would also fall under this category. Purcell-Gates (1996) reports the frequency of interpersonal uses of literacy to be nearly 11% of all literacy use, while Teale (1986) reports only 4%. Differences in categorization of activities could account for the

observed discrepancy. However, the reported rates of interpersonal uses of literacy between the two studies are not drastically different and may not be significantly different from one another. Heath (1983), however, lists the interpersonal communication domain of literacy practices as the second most frequent in her sample. The findings of this particular study may not mirror the other two, given that Heath groups interpersonal and recreational uses of language into a single literacy domain.

The above-mentioned domains of literacy practices constitute the majority of practices observed in African American families. Note that storybook reading was not found to be a frequent literacy practice in any of the studies listed above. Teale (1986) reports that only 1% of all literacy practices involve story-book reading and Purcell-Gates(1996) reports a similar percentage at 6%. These finding mirrors other research which indicates that shared storybook reading is a relatively infrequent practice in African American families, particularly those that are low-income (Craig & Washington, 2004; Heath, 1982, 1983; Purcell-Gates 1996; Teale, 1986; Vernon-Feagans, 1996; Washington, 2001). However, the lack of much shared storybook reading in these families does not necessarily suggest a paucity of shared literacy practices between African American parents and children. Instead, children in these families tend to engage in other types of shared practices, such as viewing television shows that contain print together, reading passages from the Bible together, or engaging in joint oral storytelling. Both Heath (1983) and Vernon-Feagans (1996) report that stories in the rural African American families they studied were most often shared in the form of oral narratives. These oral narratives could refer to factual occurrences, fictionalized tales, or be a combination of the two.

Story-book reading is mentioned here to demonstrate that it may not account for a significant portion of literacy practices in African American families, in the way that it often

does in middle-class White families. Continuing to focus on shared book-reading may misrepresent the range of literacy practices that do in fact occur in African American families and communities. This emphasis on storybook reading may then serve to maintain inaccurate understandings about the nature of literacy practices in African American families. At the same time, it is possible that increased emphasis on story-book reading in schools and childcare settings in recent years, coupled with encouragement from schoolteachers and literacy professionals, has led to changes in shared storybook reading in African American families. If so, it is possible that African American families in recent years may be spending more time reading books to their children than they have in the past. In others words, patterns of shared storybook reading in African American families could be converging with patterns in White American families. An examination of shared storybook reading is included in the current study in order to examine this possibility.

### **Predictors of Literacy Practices**

Three groups of demographic predictor variables are examined in the current project. These are maternal characteristics, child characteristics, and household structure variables. Each are reviewed below, in terms of the existing research literature regarding their potential impact on family literacy practices.

**Maternal characteristics.** One of the main characteristic that is often studied for its potential influence on family literacy practices is maternal level of education (Purcell-Gates, 1996; Taylor & Dorsey-Gaines, 1988). As Purcell-Gates (1996) writes, “the degree of education of the parents would presumably affect the nature of the print being read and written in the homes since it is related to literacy skill (i.e., the more literate one is, the more one is able to, and inclined to, read more complex written language)”. Many studies suggest that maternal

education is, in fact, a powerful predictor of children's language and literacy skills (Burgess, Hecht, & Lonigan, 2002; Dickinson & Snow, 1987; Raikes et al., 2006; Scarborough & Dobrich, 1994; Teale, 1986). Increased maternal education has been found to be related to increased language and literacy and increased overall academic performance for children. Furthermore, it is believed that education influences the type and frequency of activities in which mothers engage with their children. For this reason, maternal education is included as a predictor variable in the current analyses. It is hypothesized that maternal education will influence all three categories of literacy activities: maternal, child, and joint. When children are as young as 24 and 36 months of age, it is likely that mothers, as opposed to the children themselves, exert much more influence on the types of literacy activities in which the family participates.

Mother's employment status could also impact the literacy activities they engage in with their children and the degree to which they participate in literacy practices themselves. Employment status includes a variety of elements, ranging from whether a mother is employed or not, to the number of jobs held, the number of hours worked, and type of shift worked. Employment relates not only to the ability of mothers to purchase and provide literacy materials for themselves and their children, but also relates to constraints of time. Clearly, mothers who work night shifts and who maintain drastically different sleep/wake cycles than their children or those who work long hours may have less time to devote to joint literacy activities than mothers who may work day shifts or who may not work at all (Vernon-Feagans et al., 2008). At the same time, mothers who hold a single, relatively well-paying job during daytime hours, may be more able to purchase materials explicitly aimed at teaching literacy and may be more available time-wise to engage in literacy practices with those materials and their children than mothers

who do not. Because of the range of employment variables, and the range of types of literacy practices, it is possible that employment influences literacy practices in complex ways that cannot be easily predicted, or that do not easily fit into simply hypothesis. The current project aims to provide a clearer picture through the combination of a variety of employment variables.

Marital status of mothers is predicted to influence family literacy practices in significant ways as well. The availability of a marital partner may provide increased financial and time resources, which may lead to an increase in the frequency of family literacy practices. On the other hand, conflicts between marital partners could lead to increases in stress levels and potentially lead to decreased frequency of family literacy practices. For instance, in a recent study, Pancsofar and colleagues (2006) found that the degree of marital love was predictive of the diversity of maternal vocabulary to children at 24 months of age. Marital conflict, on the other hand, was not a significant predictor of maternal language. Marital conflict, at the same time could contribute to overall levels of parental depression. It is then possible that maternal depression could influence both maternal and joint literacy activities. Mothers who are depressed may be less emotionally available to devote the same frequency to joint literacy activities as mothers who are not (Vernon-Feagans, et al, 2008).

Finally, the age of mothers could potentially influence the frequency of maternal, child, and joint literacy practices in which families engage. Generally, research indicates that the frequency of literacy practices increase as maternal age increases (Scarborough & Dobrich, 1994). However, this correlation between increased maternal age and increased frequency in literacy practices could be confounded with increased education, which also tends to increase with maternal age.

Maternal depression is the final maternal characteristic to be included in the current analysis. Work by Field and colleagues (2006) indicates that depressed mothers typically display less stimulating interactive behavior with their infants and that these infants tend to perform lower on standardized measures of development at one year of age. It is therefore possible that differing levels of maternal depression could lead to differences in the frequency of joint mother-child literacy practices in particular, as well as to less frequent maternal literacy practices.

**Child characteristics.** When children begin to talk and to acquire language skills that form the basis of literacy skills, mothers may alter the way in which they interact with them. In this way, a child's language skills may influence the manner and frequency of joint literacy activities mothers choose to do with them. Mothers of children with extremely high language skills may be the most likely to engage in joint literacy activities with their children. Mothers of children with high language levels may want to continue to challenge their children and may therefore begin teaching their children literacy skills at an earlier age for instance. In a sample of African-American, Caucasian, and Latina mothers whose children participated in Head Start programs, Raikes and her colleagues (2006) report a reciprocal relationship between children's vocabulary and shared book-reading at 24- and 36-months of age. Others have found an association between language and cognitive skills and the frequency of joint-literacy activities (Bus, van Ijzendoor, & Pellegrini, 1995; Scarborough, Dobrich, & Hager, 1991). These studies primarily focus on shared book-reading, but it is possible a child's language development could extend to other domain of literacy practices as well. For the reasons listed above, child language will be included as a predictive factor in the current study.

Child temperament represents another possible factor that could predict the frequency of literacy practices in the home, although this child characteristic has received fairly little attention in research in the literature on family literacy practices. Nevertheless, research by Coplan and colleagues (1999) as well as by Noel and colleagues (2008) suggests that children who score higher on standardized measures of attention span and sociability and lower on activity level and emotionality tend to score higher on measures of early literacy, including narrative ability. Noel and colleagues hypothesize that the aspects of child temperament they examined (activity level, sociability, and emotionality) all relate to parent-child interactions. In other words, a positive child temperament can help to foster the very type of positive parent-child interactions that in turn help to foster the development of language and literacy skills such as narrative ability. Although the current study does not directly assess the positivity of such parent-child interactions, it will shed light on how child temperament may impact the frequency of these literacy-related parent-child interactions.

**Household structure.** Along with maternal and child characteristics and behaviors, several factors relating to the household structure could influence the nature of maternal, child, and joint mother-child literacy practices. The variable that has received the most attention for its relation to literacy practices is socioeconomic status (SES). Studies typically report that families of lower socioeconomic status engage in literacy practices less frequently than families of higher socioeconomic status (Bradley et al, 2001; Storch & Whitehurst, 2001). However, studies of low-income families report that these families actually engage in literacy practices that relate to daily living routines and entertainment on a fairly frequent basis (Heath, 1983; Purcell-Gates, 1996; Taylor & Dorsey-Gaines, 1988; Teale, 1986; Vernon-Feagans, 1996). Therefore, it may be more accurate to state that socioeconomic status affects the frequency with

families engage in *particular* literacy practices relative to others, than to assume that families of higher SES levels engage in all literacy practices with a greater frequency than lower SES families.

A problem in using SES as a predictive factor, however, is that this variable tends to be comprised of other variables, such as maternal education, occupation, and income. In statistical analyses, therefore, SES may be confounded with some of these other variables. The current project uses an income-to-needs ratio as a means of approximating socioeconomic status, thereby avoiding problems of confounding variables.

Finally, the current study will examine whether the number of people in the home influences the nature of family literacy practices in rural African American families. Both the number of adults and the number of children in the home may play a role. It is possible that a greater number of adults or other older children in the home will increase the frequency of total literacy practices. The child may have more adults with whom to engage in literacy practices or may simply observe more individuals in the household engaged in literacy and mimic those behaviors. Conversely, if the child has others with whom to engage in literacy practices, the frequency of joint mother-child literacy practices could decrease.

Furthermore, while mothers are the focus of the current analysis, it is possible that other individuals in the household may engage in joint literacy practices with target children as well, thereby influencing the overall frequency of joint literacy practices in the home. Research indicates that fathers and other individuals in the home often read stories to young children (Britto et al., 2002; Dickinson & DeTemple, 1998). Therefore, the number of adults in the household may decrease the frequency of joint mother-child literacy practices. On the other hand, the presence of several children in the home could increase demand's on a mother's time,

thereby decreasing the amount of time a mother has to devote to joint literacy practices with those children, or if a great deal of time must simply be devoted to care and supervision. Similarly, she also may not be able to devote as much time to her own maternal literacy practices.

## **Methods**

### **Participants**

The participants in this study represent a subset of families who are part of a larger study called the Family Life Project (FLP). The FLP was designed to study families living in rural poverty in two specific regions of the United States. Those two regions are the Appalachian Mountain region and the African-American South (Burchinal et al., 2008). Within these larger regions, three counties were chosen in both Pennsylvania and North Carolina. The study began with a total of 1,292 families recruited from both states, with an oversampling of low-income families (at or below 180% of the poverty line) in both regions and an oversampling of African American families in North Carolina. Households with intent to move out of the target county or that did not speak English as their primary language were excluded from consideration. The study began when target children were born and continues to follow the children through early elementary school. However, the current paper focuses only on two time points: when target children were 24 and 35 months old. Additionally, the current paper focuses specifically on a subset of 347 of the 519 African American families who were enrolled in the larger FLP study. Only families in which the mother is the primary caretaker and with data collected for all variables of interest at both the 24- and 36-month time points are included in final subset of 347 families.

The Family Life Project is unique in that it is truly representative sample of six entire communities. While not every family contacted remains in the study, the study began by tracking every baby born to a mother in three rural counties in Pennsylvania and three rural counties in North Carolina. Rural communities continue to be overlooked in studies of child development, despite the fact that an estimated 20% of all children in the United States live in rural areas (Children's Defense Fund, 2004). Children living in rural areas also constitute a large percentage of children growing up in poverty (Rivers, 2005). And yet, while studies on the development of children in poverty abound, they tend to focus on urban samples rather than rural ones. The Family Life Project therefore fills an important gap in the literature regarding children living in rural areas.

The current study, representing a subset of families in the Family Life Project, also contributes to the body of literature regarding the development of African American children. As many research studies have shown, African American children are more likely than other children to be raised in poverty (Brooks-Gunn, Klebanov, & Duncan, 1996). Just as studies of all children living in poverty tend to focus on urban samples, studies of African American children in poverty also focus heavily on urban samples, to the exclusion of rural samples. This research trend continues despite the fact that African American children constitute the largest rural racial or ethnic minority group in the United States. Moreover, in rural areas, African American children are twice as likely as other children to be poor (Graefe & Lichter, 2002). Therefore, this sample of rural families adds an important addition to studies of low-income African American communities.

Table 1 displays mean values for all demographic variables included in the study.

Table 1

*Predictor Variables, child age = 24 months (n = 347)*

Characteristic	Mean ( <i>SD</i> )	Minimum	Maximum
<b>Maternal</b>			
Mother's Age (in yrs.)	26.41 (5.46)	17.08	46.43
Educational Level	12.30 (1.56)	8.00	18.00
Employment	0.61 (0.49)	0.00	1.00
Number of Jobs	0.64 (0.56)	0.00	2.00
Hours worked/wk.	37.32 (10.90)	5.00	80.00
Partner Status	0.30 (0.46)	0.00	1.00
C-ESD: Depression	0.65 (0.47)	0.00	2.55
<b>Child</b>			
Child's Age (in mths.)	25.29 (1.91)	22.57	33.77
ECBQ: Impulsivity	4.74 (0.64)	2.80	6.80
ECBQ: Inhibition	3.63 (1.03)	1.00	6.56
ECBQ: Attn. Focus	4.04 (0.57)	2.20	6.00
ECBQ: Attn. Shift	4.21 (0.92)	1.33	6.50
ECBQ: Low Intensity Pleasure	4.44 (1.47)	1.00	7.00
ECBQ: Sadness	4.04 (1.47)	1.00	7.00
PLS: Expressive Lang.	97.78 (12.89)	50.00	133.00
<b>Household</b>			
No. of People in Home	4.40 (1.60)	2.00	12.00
Income/Needs Ratio	1.19 (0.98)	0.00	8.47

As can be seen from the table above, mothers were an average age of 26 years ( $SD = 5.5$ ; range = 17 - 46) when children were 24 months old. Mothers, on average, had completed high school. From the employment variables, it can be seen that mothers worked an average of 37 hours per week, though not all mothers are employed.

In terms of child characteristics, children were an average of 25 months ( $SD= 1.91$ ; range = 22 – 33) when data was collected. Additionally, they scored at or above average on all six measures of temperament. In terms of language development, children are performing at the national average. This finding is quite remarkable, given the extreme poverty level in the current sample and the large body of research stating that low-income populations perform well below average on standardized measures of language achievement (Snow, Burn, & Griffin, 1998; Washington, 2001). As Washington (2001) writes, many African American children, particularly those who are low-income, display both expressive and receptive vocabulary levels that are below age-level expectations by the time of school entry. Clearly, descriptive statistics indicate that children in this particular sample of low-income African American families are not lagging behind their peers, by any means. According to the results of the PLS-4, their expressive language skills are on par with other American children prior to school entry. Descriptive statistics also indicate that this particular sample of African American mothers are slightly more educated than many other similar samples (with an average educational level at completion of high school) and that these families participate in a number of literacy practices more frequently than may be expected given the existing body of research. It could be that these high levels maternal education and literacy engagement contribute to home environments in which children's language skills are fostered and supported. Whatever the case may be, it is important to note that many African American children may not *enter* schools with language

skills that lag behind their peers, but that something in the experience of schooling does not lead to advancement in school language and literacy skills, such that African American children lag further and further behind their peers as they progress through schools. This finding is a strong indication that something is awry in regards to the education of African American children within schools, rather than in regards to their preparation prior to school entry. This finding also suggests that schools must adapt to better address the needs of African American students.

Descriptive statistics of household structure reveal that homes had an average of 4 people living in the home when children were 24 months old. Additionally, an income-to-needs ratio of 1.19 indicates a high level of poverty, but possibly also reflects the oversampling of poor families in the larger Family life Project.

### **Predictor Variables**

All predictor variables represent data collected when the target child was 24 months of age.

**Maternal Characteristics.** Based on a review of the literature, the following maternal variables are examined in terms of their influence on family literacy practices.

- Age
- Education
- Employment Status (working or not, # of jobs, # of hours worked)
- Partner Status (partnered or not)
- Depression

Maternal age simply refers to the age of the mother when the child was 24 months of age. Only biological mothers who are primary caregivers are included in the current analysis.

Maternal education refers to the highest educational level completed by the mother.

Employment status is the combination of three separate variables: employment (whether or not mom is employed), number of jobs held, and the total number of hours worked. Partner status simply refers to whether the mother has an intimate partner regardless of whether the two are married or live in the same household. All of the variables listed so far were gathered by maternal self-report. Finally, mothers completed the Center for Epidemiological Studies Depression Scale (C-ESD; Radloff, 1977), which provides information on maternal depression.

**Child characteristics.** The child characteristics examined in the current study are:

- language skills
- temperament

To assess children's language skills, home visitors administered the Preschool Language Scale, version 4 (PLS-4). The PLS-4 is a standardized test used to identify children from birth through 6 years, 11 months of age who have a language disorder or delay. It is comprised of two subscales: the Auditory Comprehension (AC) subscale and the Expressive Communication (EC) subscale. The first subscale (AC) examines a child's ability to understand language, through assessment of comprehension of vocabulary, concepts, and grammatical markers. The second subscale (EC) assesses a child's ability to communicate with others by asking children to name objects, use concepts to express quantity, and use specific prepositions, grammatical markers, and sentence structures. Only scores from the expressive language component are used in the current analyses.

The Early Child Behavior Questionnaire (ECBQ) was used to assess child temperament. The ECBQ was created to supplement the Toddler Behavior Assessment Questionnaire (TBAQ; Goldsmith, 1996). The TBAQ is a parent-report questionnaire used to assess the temperament of young children. The ECBQ broadened the conceptualizations of temperament by adding

“reactive processes involving not only emotion, but also motor and sensor systems, as well as an emphasis on self-regulatory processes that modulate reactivity” (Putnam, Garstein, & Rothbart, 2006; Rothbart & Derryberry, 1981; Rothbart et al., 2001). Furthermore, the ECBQ includes items that are extended downward from the Children’s Behavior Questionnaire (CBQ; Rothbart et al., 2001), which is designed for children from 3 to 7 years of age as well as items that are extended up from the Infant Behavior Questionnaire-Revised (IBQ-R; Gartstein and Rothbart, 2003), which is designed for children ranging in age from 3 to 12 months. While the ECBQ has been standardized, for the purposes of the current study, only a subset of all questions are administered, and these scores were compiled into various subscales. Mean scores from the following six subscales are included in the current analyses: Impulsivity, Inhibitory Control, Attentional Focus, Attentional Shift, Low Intensity of Pleasure, and Sadness.

**Household structure.** Household structure is described in terms of

- number individuals in the home
- income to needs ratio

The number of individuals in the home contains both the number of adults as well as the number of children living in the home. Income to needs ratio approximates the socioeconomic status of these families. While many traditional models of socioeconomic status factor maternal education into the equation, using a ratio of income to needs avoids confounding socioeconomic status with maternal education, which is already included as a predictor variable in the current study.

### **Outcome Variables**

Previous research regarding literacy practices in African American families, as can be seen from the review of the literature presented above, has continued along a tradition of rank

ordering literacy practices according to their overall or total frequency. In other words, these studies tend to utilize methods of percentile ranking. The data used in this particular project do not lend themselves to a directly equivalent comparison. However, it is possible to rank order literacy practices from according to relative frequency, from the most frequent to the least frequent. Through this type of ranking, it is possible to determine, on some level, the extent to which current analyses replicate previous findings.

A slightly different approach from research past is also taken in regards to the categorization of literacy practices. Whereas previous research groups literacy practices according to their purpose or function, such as literacy for daily living or literacy for entertainment, this project groups literacy practices according to participant structure. In other words, literacy practices are grouped into the following: maternal literacy practices, in which mothers alone participate, child emergent literacy practices, in which children participate alone, and joint literacy practices, in which both mother and child participate. Therefore, all predictor variables are assessed in terms of their impact on these three types of literacy practices as outcomes: maternal, joint, and child. Nevertheless, analyses can be grouped along the same general lines of functionality, again allowing for a degree of comparison.

All outcome variables pertaining to literacy practices in the current study are derived from responses to the Family Activities Questionnaire (FAQ, Vernon-Feagans, Odom, & Pancsofar, 2004), which was administered at both the 24 and 36 month time points. The FAQ is a measure of literacy practices in which families participate. It was designed specifically for the purposes of the Family Life Project and was created as a result of qualitative research on the literacy practices in the participating families. These families were initially asked about the types of literacy practices they typically engaged in with their young children and their

responses were combined with other activities known to be fairly common to African American families with young children, based on existing research. Based on preliminary information about the types of literacy activities in which these families “naturally” participate, combined with items from other research on family literacy practices, a 5-point likert scale was developed. The 5-point likert scale asks mothers to approximate how frequently they or their children participate in literacy behaviors. Descriptions associated with the 5 values on the scale are as follows: 1 – Daily; 2 – A few times per week; 3 – Weekly (Once a week); 4 – Two to three times per month; 5 – Once a month or less.

The FAQ consists of 52 questions, the majority of which deal with family literacy practices. There are also items that pertain to basic child care routines and schedules, computer literacy, and access to technology, but those items have been omitted from the current study. In other words, questions pertaining to children’s daily schedules and family access to technology (questions 31-46 and 48-52) are not included. For the purposes of this study, analyses are limited to the 22 items on the FAQ which are most directly related to literacy. It should be noted that while many of these items pertain to print literacy, there are a number of items associated with oral language and oral literacy skills, such as singing nursery rhymes and telling stories orally.

The FAQ was completed by the child’s primary caregiver, which in this particular data set is restricted solely to mothers, when their children were both 24 and 36 months of age. The questionnaire asks mothers to approximate the amount of time either they themselves engage in literacy practices (maternal literacy behaviors), they engage in joint literacy activities with their child (joint literacy behaviors), and how often their child engages in literacy practices alone (child literacy behaviors).

Individual items on the FAQ were grouped by type in order to construct these subscales. The maternal literacy subscale is composed of 8 items (question 23-30) pertaining to practices in which parents, or in this case, mothers participate alone. The joint literacy subscale is comprised of 10 items (questions 8-16 and 22) pertaining to language and literacy practices in which mothers and children participate together. Finally, the child literacy subscale is comprised of 5 items on the FAQ (questions 1-2 and 4-6) in which the child alone engages in child literacy practices. Questions 7, 15, and 17-21 were also omitted since they did not fit cleanly into any of the subscales listed above. These questions ask about the frequency of activities such as the following: trips to places like fast food restaurants, church, community parks, how often mothers engage in homework with older children in the household, and how often target children play with other children.

Descriptive statistics of the three subscales of the Family Activities Questionnaire are presented in Table 2 below. All scores represent data collected when target children were 36 months of age.

Table 2

*Mean Scores on the Family Activities Questionnaire*

FAQ Subscale	Mean ( <i>SD</i> )	Minimum	Maximum
Child Literacy Behaviors	2.39 (1.16)	1.00	5.00
Joint Literacy Behaviors	1.75 (0.85)	1.00	5.00
Maternal Literacy Behaviors	3.51 (1.34)	1.00	5.00

**Analysis**

To reiterate, the first question in the current study is as follows: What are the literacy practices of rural African American mothers and their young children at 24 and 36 months of age? In order to answer this question, mean scores on individual items of the FAQ were analyzed in order to assess the most and least frequent literacy behaviors in these rural African American families.

The second question in the study examine how maternal, child, and household structure variables when children are 24 months of age are related to literacy practices in these families one year later. Hierarchical regression analyses are used to provide answers to this question. The first level of the hierarchical regression consists of maternal variables. This predictor is hypothesized to be the most influential because children in this study are rather young and their activities are likely to be structured more by their parents than by themselves. Therefore, maternal characteristics are entered in step 1 of analyses and child characteristics are entered in step 2. Finally, household variables were entered in the third step of the regression.

**Results**

Question 1: What are the literacy practices of rural African American mothers and their young children at 24 and 36 months of age?

The five most frequent literacy practices at both time points are presented in Tables 3 and 4 below.

Table 3

*Most frequent family literacy practices at child age = 24 months*

Literacy Practice	Mean (SD)	FAQ item #	Type
1. Caregiver names objects/people for child	1.26 (0.62)	8	Joint
2. Caregiver sings songs and/or says nursery rhymes with child	1.30 (0.70)	9	Joint
3. Caregiver watches TV, DVD, or video with child	1.35 (0.72)	13	Joint
4. Child pretends to write or scribble	1.51 (0.82)	2	Child
5. Caregiver helps child learn numbers	1.58 (0.98)	12	Joint

Table 4

*Most frequent family literacy practices at child age = 36 months*

Literacy Practice	Mean (SD)	FAQ item #	Type
1. Caregiver names objects/people for child	1.32 (0.67)	8	Joint
2. Caregiver sings songs and/or says nursery rhymes with child	1.32 (0.72)	9	Joint
3. Caregiver watches TV, DVD, or video with child	1.37 (0.72)	13	Joint
4. Child pretends to write or scribble	1.38 (0.68)	2	Child
5. Caregiver helps child learn numbers	1.49 (0.83)	12	Joint

According to responses on the Family Activities Questionnaire, the majority of these rural African American families participate in a number of literacy practices on a daily basis. As can be seen from the tables above, the most frequent family literacy practices are, by and large, those in which mother and child are jointly engaged in activities. Additionally, the five most frequent practices are a combination of literacy used for entertainment as well as explicit instructional uses of literacy. Play-based activities for young children prior to school entry arguably represent both natural as well as productive forms of developmentally-appropriate learning experiences. According to Gee’s theory of literacy acquisition, this type of

subconscious exposure to literacy represents some of the most powerful instances of literacy learning. In these instances, children learn about the functions of literacy, such as communication and entertainment, along with more technical aspects of literacy that are typically taught in schools.

Data from this particular sample of rural African American families represents a divergence from previous research with similar samples. Heath (1983), Purcell-Gates (1996), and Teale (1986) all report that the most frequent literacy practices in smaller samples of African American families can be grouped under the broad categories of daily living routines and entertainment/recreation. Explicit teaching of literacy was found to occur as frequently in these previous studies as in the current one. Admittedly, categories of literacy practices in these existing studies are somewhat problematic, in that they do not provide clear distinction between behaviors that may cross categories. For instance, particular activities, such as speaking with other members of the family over the phone, or even sending emails, could be classified as examples of both daily living routines and interpersonal communication. Nevertheless, it appears that the five most frequent literacy practices in the current study would fall under the broad categories of literacy for entertainment and literacy for the purpose of teaching literacy.

Additionally, analyses of the most frequent literacy practices indicates that four of the five most frequent practices fall under the grouping of joint literacy behaviors. These four practices involve mothers assisting their children to acquire vocabulary, phonological skills, and number concepts and they all occur on nearly a daily basis. The final practice involves children pretending to write or scribble, in which children are clearly engaged in emergent literacy skills. Interestingly, none of the most frequent family literacy practices involve mothers alone engaging in literacy. While mothers are engaged on a weekly basis in a number of literacy

practices alone, they appear to spend more of their time jointly engaged in literacy practices with their 24- month-old children, than they do on their own.

Notice also that the most five frequent activities in which families with young children participate are the same when children are both 24 and 36 months of age, though in slightly different order. This pattern of results suggests that family literacy practices remain fairly stable within this time period. It is possible that literacy practices within families are fairly stable up to the point of school entry. Such a pattern would align with research by Purcell-Gates (1996) who reports the largest change in the frequency of literacy practices in low-income families at the point of entry into formal schooling. Together, these results suggest that low-income African American parents do not significantly alter their literacy practices based on intrinsic characteristics of their children, such as age or skill level, but rely more on external markers of transition, such as changes in schooling.

Tables 5 and 6 chart the frequency of all twenty two items on the FAQ that are used in the current analyses.

Table 5

*Literacy Practices according to the Family Activities Questionnaire, child age = 24 months*

Literacy Practice	Mean <sup>a</sup>	Item#	Type <sup>b</sup>
1 Caregiver names new objects/people for child	1.26 (0.61)	8	J
2 Caregiver sings songs and/or says nursery rhymes w/ child	1.30 (0.69)	9	J
3 Caregiver and child watch TV, video, DVD together	1.35 (0.72)	13	J
4 Child pretends to write or scribble	1.51 (0.82)	2	C
5 Caregiver helps child learn numbers	1.58 (0.98)	12	J
6 Caregiver helps child learn alphabet sounds	1.61 (1.03)	11	J
7 Child looks at book or magazine alone	1.71 (0.96)	1	C
8 Caregiver looks at or reads book to child	1.72 (0.99)	22	J
9 Caregiver helps child learn to write	2.06 (1.33)	10	J
10 Caregiver reads a newspaper or magazine	2.39 (1.45)	25	M
11 Caregiver takes child shopping	2.43 (1.04)	16	J
12 Child tells a real-life or made-up/pretend story	2.68 (1.70)	4	C
13 Caregiver tells child story about own childhood or family	2.69 (1.52)	14	J
14 Caregiver reads Bible or other religious material	3.09 (1.53)	24	M
15 Caregiver reads an adult book (not religious)	3.10 (1.54)	23	M
16 Caregiver makes a grocery or to-do list	3.21 (1.34)	29	M
17 Child recites words from Bible or other religious material	3.53 (1.67)	5	C
18 Caregiver reads a church bulletin/newsletter	3.58 (1.36)	26	M
19 Caregiver uses dictionary or encyclopedia (online, print)	3.92 (1.33)	27	M
20 Child makes a card or letter at home for someone	4.18 (1.32)	6	C
21 Caregiver uses written recipes	4.22 (1.20)	28	M
22 Caregiver sends a card or letter to friend/relative	4.28 (1.12)	30	M

<sup>a</sup>Daily = 1    Few times/wk = 2    Weekly = 3    Few times/mth = 4    Monthly or less = 5

<sup>b</sup>C = Child, J = Joint, M = Maternal

Table 6

*Literacy Practices according to the Family Activities Questionnaire, child age = 36 months*

Literacy Practice	Mean <sup>a</sup>	Item#	Type <sup>b</sup>
1 Caregiver names new objects/people for child	1.32 (0.67)	8	J
2 Caregiver sings songs and/or says nursery rhymes with child	1.32 (0.72)	9	J
3 Caregiver and child watch TV, video, DVD together	1.37 (0.71)	13	J
4 Child pretends to write or scribble	1.38 (0.68)	2	C
5 Caregiver helps child learn numbers	1.49 (0.83)	12	J
6 Caregiver helps child learn alphabet sounds	1.58 (0.10)	11	J
7 Child looks at book or magazine alone	1.66 (0.88)	1	C
8 Caregiver helps child learn to write	1.75 (1.04)	10	J
9 Child tells a real-life or made-up/pretend story	1.78 (1.17)	4	C
10 Caregiver looks at or reads book to child	1.84 (0.99)	22	J
11 Caregiver reads a newspaper or magazine	2.39 (1.36)	25	M
12 Caregiver takes child shopping	2.55 (1.08)	16	J
13 Caregiver tells child a story about own childhood or family	2.57 (1.49)	14	J
14 Caregiver reads Bible or other religious material	3.12 (1.55)	24	M
15 Caregiver reads an adult book (not religious)	3.17 (1.54)	23	M
16 Child recites words from Bible or other religious material	3.19 (1.66)	5	C
17 Caregiver makes a grocery or to-do list	3.29 (1.32)	29	M
18 Caregiver reads a church bulletin/newsletter	3.67 (1.32)	26	M
19 Caregiver uses dictionary or encyclopedia (may be online)	3.85 (1.35)	27	M
20 Child makes a card or letter at home for someone	3.94 (1.39)	6	C
21 Caregiver uses written recipes	4.23 (1.17)	28	M
22 Caregiver sends a card or letter to friend/relative	4.33 (1.11)	30	M

<sup>a</sup>Daily = 1    Few times/wk = 2    Weekly = 3    Few times/mth = 4    Monthly or less = 5

<sup>b</sup>C = Child, J = Joint, M = Maternal

According to the data collected, 24-month-old children in these rural African American families are themselves engaged in a number of varied literacy practices on a near daily basis. Rather than simply observing their mothers engaged in literacy practices, these children are often engaged in literacy activities themselves or jointly with their mothers. Of particular interest is the item on the Family Activities Questionnaire pertaining to shared storybook reading. With FAQ scores at 1.72 at 24 months and 1.84 at 36 months, it appears that these families participate in literacy activities a few times per week on average. Clearly, literacy practices represent frequent activities in the homes of these families. As mentioned earlier, many studies on family literacy practices in ethnic minorities and in families of varied class backgrounds often use White-middle class families as the norm. Typically, ethnic minorities and low-income families are found to participate in literacy practices less frequently than White, middle-class families (Bradley, et al, 2001; Britto et al., 2002; Raikes et al., 2006). Still, much of this research typically involves families with children older than those examined in the current study. Based on the more limited set of studies pertaining to families with toddlers, Britto and colleagues (2002) have found that approximately 45% of a representative sample of American families read daily to their children, while Bradley and colleagues (2001) find that about 51% of families read to their children several times per week. In a study restricted to low-income families in particular, Raikes and colleagues (2006) report that approximately 55% of parents read to their children daily at 24 months. This research, together with the current study, suggest that most low-income African American families are engaged in shared storybook reading on a weekly basis and many engage in this practice on a daily basis. Still, the current study suggests that focuses solely on shared storybook reading only gives a partial

picture of the range of literacy practices in which African American families engage, many of which occur more frequently than shared storybook reading.

A closer examination of all literacy practices at both the 24- and 36-month time points indicates that children in these families are engaged in a number of literacy practices several times per week. Furthermore, there are a number of activities that these children participate in on a daily or near daily basis. Children are engaged in activities related to print literacy, as well as those related to oral literacy. Contrary to prior work citing limited literacy practices in low-income African American families, results of the current study reveal that these families are regularly engaged in an abundance of literacy practices.

What could account for these discrepant findings? As has been stated, there has been an overemphasis on shared storybook reading in many studies of family literacy practices. Results of the current study indicate that the majority of these families engage in shared storybook reading more than a few times a week. When children are 36 months old, the average frequency of shared storybook reading reported is 1.84 (where 1 indicates daily engagement and 2 indicates engagement a few times per week). However, this is but one of nine other literacy practices in which these families participate more than a few times per week (referring to practices with a mean less than 2.00). Therefore it is possible that other studies, which may focus on shared storybook reading are missing a range of other activities in which African American families participate.

Similarly, literacy research tends to focus on print-based literacy activities whereas the current study expands traditional definitions of literacy practices to include a number of oral literacy practices as well. For instance, caregivers naming objects for their children, children telling stories, and parents and children reciting nursery rhymes and singing songs are all

included as literacy practices. All three of these examples represent literacy practices that occur in these families from more than a few times a week to every day. These results align with prior research which shows the significance of the oral tradition in African American communities and the frequency with which it occurs. Results of the current study which indicate that many different literacy practices occur frequently in African American families may therefore be a more accurate representation of the full range of literacy practices that occur in these families. Other research may find lower levels of literacy practices in these households due to an omission of several of these common practices.

The current project therefore contributes significantly to the body of research literature on literacy in African American families by suggesting that much prior research has underestimated the frequency and range of total practices. Also, this study provides recent findings regarding the frequency of shared storybook reading in particular. Prior research reports that African American families, and particularly low-income African American families, rarely read stories together (Washington, 2001). However, this study paints a different picture. Families participating in this study reportedly read storybook with their children more than a few times per week. It is hypothesized that these families may be responding to recent pressures from teachers, interventionists, and literacy experts who stress the importance of shared storybook reading. Much of the prior research indicating infrequent shared storybook reading in African American families is based on studies prior to the past decade and before recent changes in educational policy, such as the No Child Left Behind Act (NCLB, 2002). Therefore, it appears that low-income African American families may be converging with middle-class White families in the frequency of shared storybook reading. Nevertheless, these results do not suggest that shared storybook reading should remain central to discussions of

family literacy practices. Rather, shared storybook reading should be understood as one of a range of practices that make up the literate environments of African American homes and communities.

Question 2: How are maternal characteristics, child characteristics, and household structure when children are 24 months of age related to the literacy practices in which rural African American mothers and children engage one year later (when children are 36 months of age)? Tables 7-9 display the results of hierarchical regression analyses, which provide answers to this question.

Table 7

*Hierarchical Regression Analysis Predicting Child Literacy Practices (on FAQ)*

Predictor	Maternal		Child		Household	
	Beta	SE	Beta	SE	Beta	SE
Step 1: Maternal						
Age (in yrs.)	-0.00	0.01	-0.00	0.00	-0.00	0.01
Educational Level	0.05	0.03	0.03	0.03	0.02	0.03
Employment	-0.51*	0.21	-0.50*	0.21	-0.49*	0.21
Number of Jobs	0.46*	0.18	0.44*	0.18	0.45*	0.19
Partner Status	0.10	0.09	0.10	0.09	0.13	0.10
C-ESD: Depression	0.10	0.08	0.13	0.08	0.14	0.09
Step 2: Child						
ECBQ: Impulsivity			-0.11	0.06	-0.11	0.06
ECBQ: Inhibition			-0.00	0.04	-0.00	0.04
ECBQ: Attn. Focus			0.13	0.08	0.13	0.08
ECBQ: Attn. Shift			0.04	0.05	0.04	0.05
ECBQ: Low Intensity Pleasure			0.03	0.03	0.03	0.03
ECBQ: Sadness			-0.01	0.04	-0.01	0.04
PLS: Expressive Lang.			0.01**	0.00	0.01**	0.00
Step 3: Household						
No. of People in Home					-0.01	0.05
Income/Needs Ratio					-0.03	0.03
$R^2$	0.035		0.099		0.104	

 $n = 347$ ;\* $p < 0.05$  \*\*  $p < 0.01$

Table 8

*Hierarchical Regression Analysis Predicting Joint Literacy Practices (on FAQ)*

Predictor	Maternal		Child		Household	
	Beta	SE	Beta	SE	Beta	SE
Step 1: Maternal						
Age (in yrs.)	-0.01	0.01	-0.01	0.01	-0.01	0.01
Educational Level	0.07**	0.02	0.06*	0.02	0.07**	0.03
Employment	-0.20	0.18	-0.18	0.18	-0.16	0.18
Number of Jobs	0.12	0.15	0.10	0.15	0.09	0.15
Partner Status	-0.07	0.08	-0.06	0.08	-0.09	0.08
C-ESD: Depression	0.02	0.07	0.04	0.07	0.03	0.07
Step 2: Child						
ECBQ: Impulsivity			-0.08	0.05	-0.08	0.05
ECBQ: Inhibition			-0.01	0.04	-0.01	0.04
ECBQ: Attn. Focus			0.11	0.06	0.11	0.06
ECBQ: Attn. Shift			0.05	0.04	0.05	0.04
ECBQ: Low Intensity Pleasure			-0.02	0.03	-0.02	0.03
ECBQ: Sadness			-0.02	0.03	-0.02	0.03
PLS: Expressive Lang.			0.01**	0.00	0.01**	0.00
Step 3: Household						
No. of People in Home					-0.02	0.04
Income/Needs Ratio					0.03	0.08
$R^2$	0.032		0.080		0.088	

 $n=347$ \* $p<0.05$  \*\*  $p<0.01$

Table 9

*Hierarchical Regression Analysis Predicting Maternal Literacy Practices (on FAQ)*

Predictor	Maternal		Child		Household	
	Beta	SE	Beta	SE	Beta	SE
Step 1: Maternal						
Age (in yrs.)	0.03**	0.01	0.03**	0.01	0.03**	0.01
Educational Level	0.02	0.03	0.01	0.03	0.03	0.04
Employment	-0.11	0.23	-0.12	0.23	-0.10	0.24
Number of Jobs	-0.06	0.20	-0.04	-0.21	-0.05	0.21
Partner Status	0.07	0.10	0.08	0.10	0.05	0.11
C-ESD: Depression	0.08	0.09	0.06	0.10	0.04	0.10
Step 2: Child						
ECBQ: Impulsivity			-0.17**	0.07	-0.18**	0.07
ECBQ: Inhibition			-0.04	0.05	-0.04	0.05
ECBQ: Attn. Focus			0.09	0.09	0.09	0.05
ECBQ: Attn. Shift			-0.02	0.05	-0.01	0.05
ECBQ: Low Intensity Pleasure			-0.04	0.04	-0.04	0.03
ECBQ: Sadness			-0.04	0.03	-0.04	0.04
PLS: Expressive Lang.			0.00	0.003	0.00	0.00
Step 3: Household						
No. of People in Home					-0.03	0.06
Income/Needs Ratio					0.05	0.03
$R^2$	0.049		0.084		0.093	

 $n=347$ \* $p < 0.05$  \*\*  $p < 0.01$

## **Discussion**

Of the three groups of predictor variables, maternal characteristics when children are hypothesized to be most influential on later literacy practices, particularly on joint and child literacy behaviors. This is primarily due to the fact that these children are still quite young and the activities in which they participate are likely to be shaped more by their parents than by themselves. At the same time, research indicates that joint literacy practices between mothers and children tends to be a reciprocal process, such as that parents may initiate certain practices with their children, while children's skills and preferences also influence the type and frequency of practices that mothers choose to engage in with them. While this reciprocal process has often been noted with slightly older children, recent research suggests that this reciprocal process is already in effect by the time children are 14-24 months of age (Raikes et al., 2006).

### **Child literacy practices**

Employment variables are the only maternal characteristics that appear to influence the frequency of child literacy practices. Employment status (whether mothers are employed or not) and number of jobs worked influence child literacy practices. However, these effects run opposite each other and seem counter-intuitive. Hierarchical regression analyses reveal a negative relationship between maternal employment and the frequency of child literacy practices. This runs counter to a body of research suggesting that maternal employment tends to increase the frequency of child literacy engagement (Vernon-Feagans, et al. 2005). The reason for this effect is unclear. Perhaps children of employed mothers spend more time in child care outside the home and less time participating in child literacy practices within the home. Or perhaps, since employed mothers are likely to be in the home less often than unemployed or underemployed mothers, they have less opportunity to directly encourage their children to

engage in literacy practices by themselves. Additionally, some of the activities on the FAQ which are labeled as child literacy practices do assume either some form of passive literacy partner. For instance, although a child reciting a Bible passage or telling a story are included as child literacy practices, both activities assume that another individual (possibly the child's mother) are present to listen to the child's oral account. Therefore, employed mothers may not be present as often as unemployed or underemployed mothers to be the passive participants in these types of child literacy practices.

The second employment variable examined, number of jobs worked, however suggests an opposite pattern of influence. According to regression analyses, children of mothers with multiple jobs engage in child literacy practices more frequently than children whose mothers have fewer jobs. Again, prior research suggests that increased maternal employment is associated with increased literacy practices within the home. It is likely, however, that this result differs from prior research due to the separation of *child* literacy practices from *total* literacy practices. Previous research has often found links between maternal education and joint literacy practices, such as mothers reading storybooks with their children or teaching them to write the letters of the alphabet. In contrast, the current results indicate a positive relationship between maternal employment and the frequency of *child* literacy practices. It is possible that children whose mothers maintain multiple jobs spend more time alone than other children. Children could then be spending this time alone engaged in a range of literacy practices by themselves, such as pretending to write, making cards or letters, or looking at books alone.

It is unclear as to why the two measures of maternal employment (employed or not and number of hours worked) predict opposite patterns in the frequency of child literacy practices. Clearly, future research is necessary to tease apart possible explanations.

In the second step of analysis, child variables of temperament and language skills were entered into the hierarchical regression analysis. Results reveal that none of the temperament variables account for a significant change in the frequency of child literacy behaviors. Standardized language scores on the Preschool Language Scale – 4, however, account for a significant change in the frequency of child literacy behaviors. More specifically, children with more advanced language skills tend to participate more frequently in child literacy practices, such as pretending to scribble, or telling stories to others in the household. This finding is significant, given that the majority of studies on family literacy practices typically do not take language skill into account. Raikes and colleagues (2006) are some of the few researchers who have included child language skills in studies of family literacy practices, with children as young as 14 months of age. Similar to the current study, they find that child vocabulary skills influence the frequency with which parents engage in literacy practices (namely shared storybook reading) with their children. The current study is important in demonstrating that child language may play a large role in influencing the literacy practices in which children as young as 36 months of age participate.

Finally, household structure variables were entered in the final step of hierarchical regression analysis. Results reveal that neither the ratio of income to needs, nor the number of people living in the home, significantly influence the frequency at which children at 36 months of age participate in literacy practices. The fact that the number of individuals in the home does not predict the frequency of child literacy practices, especially considering that it is hypothesized to be most influential on joint literacy behaviors. However, it is somewhat surprising that income-to-needs does not predict child literacy practices either, given that socioeconomic status is often found to relate to language and literacy practices in the home

(Bradley et al, 2001; Hart & Risley, 1995; Snow, Burns, & Griffin, 1998). On the other hand, much of this research has linked socioeconomic status and shared storybook reading primarily. Perhaps socioeconomic status is less predictive of the full range of literacy practices in which young children participate in African American families.

### **Joint Literacy Practices**

The second outcome of interest in the current study is the frequency of joint literacy practices when children are 36 months of age. These joint literacy behaviors, though primarily assumed to involve mothers and children, could involve other individuals in the home as well. Questions on the Family Activities Questionnaire are worded such that mothers, *or others in the home*, could be the ones to participate in these joint practices.

Analyses reveal that the only maternal variable leading to a significant change in joint literacy practices is that of maternal education. With more education, mothers, or other individuals in the home, tend to more frequently engage in literacy practices with target children. In other words, mothers with more education are more likely to say nursery rhymes with their children, watch television with their children, or name unknown objects and people to their children. This finding replicates other research on maternal education and joint literacy practices (Raikes et al., 2006, Scarborough & Dobrich, 1994; Teale, 1986). And just as with child literacy practices, children with more advanced language skills tend to engage in joint literacy practices more frequently than children with less advanced language skills. Once again, there is evidence supporting the need to account for child language skills when discussing family literacy practices. Through examination of joint literacy practices, it is apparent that these activities are not solely shaped by maternal factors, such as education, age, and maternal literacy skills, but child language ability also play a role in shaping these activities.

Interestingly, however, child temperament does not lead to any significant changes in the frequency of joint literacy practices. Similarly, household variables of income-to-needs ratio, and number of people in the home did not have any significant effect on the frequency of joint literacy practices. In contrast to original hypothesis, it appears that having more adults in the home does not lead to more frequent joint literacy practices, and having more children in the home also do not lead to less frequent joint literacy practices.

### **Maternal Literacy Practices**

Finally, maternal literacy practices are examined. Maternal age and child impulsivity predicted the frequency of those practices, while household structure variables did not. Older mothers tend to spend more time in literacy practices themselves than younger mothers. However, with increased impulsivity in their 24-month-old children, the opposite is true. More impulsive children tend to have mothers who participate less frequently in maternal literacy practices. This relationship seems quite intuitive. The more impulsive children are, the more care and attention they often need. Hence, mothers with more impulsive children may have less time to devote to their own personal literacy behaviors. Therefore, highly impulsive two-year-old children may have less opportunity to observe their mothers engaged in literate behaviors by the time children are three years old. This could mean that impulsive children experience less observational learning of literacy, or less literacy acquisition, to use Gee's (1989) terminology. Therefore, impulsivity may negatively impact a two-year-old child's literacy learning process early in life.

### **Conclusions and Implications**

This study provides new insights into African American family literacy practices as well as suggesting directions for future research. From the three hierarchical regression analyses

presented above, it is clear that a variety of factors influence the frequency with which rural African American families participate in literacy activities. Furthermore, maternal, child, and joint mother-child literacy practices are influenced in unique ways by different predictor variables. For example, maternal employment predicts the frequency of child literacy practices though it does not predict the frequency of joint literacy practices. Similarly, maternal education predicts joint literacy, but not child literacy practices. Therefore, this study points to the need to conceptualize maternal, child, and joint literacy practices as distinct, but related, entities.

Importantly, results of this study indicate that child language skills, even by the time children are 24 months of age, are highly predictive of the frequency of the later African American family literacy practices. This information is useful for researchers who study literacy among preschool, kindergarten, and elementary-aged children, who may believe that literacy practices within the home are initiated primarily according to parental behaviors. However, the current study suggests that abilities of the child may impact the frequency of literate practices within the home. In other words, children with more advanced language skills may be viewed by parents as more prepared to engage with literacy, leading to more frequent literacy practices. Therefore, it seems that parents base the frequency of home literacy practices on the skills or apparent readiness of children. In this sense, literacy practices are driven not only by parental influence, but by child factors as well.

What does this research finding mean for parents of African American children or for educators and child care providers who may work with these children? More specifically, what does it mean for parents and providers of children with low language skills? According to the results of the current study, both child and joint literacy practices occur less frequently with

children who exhibit lower language skills than those with strong language skills. Apparently, there is a link between child language and the frequency of family literacy practices.

Nevertheless, this apparent link does not preclude parents from increasing the frequency of literacy practices with their children regardless of that child's language abilities. In fact, it is possible that increased literacy exposure in the home could lead to increased language ability, which could in turn fuel an increase in the frequency of family literacy practices. So while advanced language skills tend to be associated with more frequent family literacy practices, they are not a prerequisite.

This research also contributes to our understanding of the specific literacy practice of shared storybook reading in African American families. Results suggest that this practice may be occurring more frequently in today's African American families in the past. This pattern could reflect a response to changing schooling environments, which have themselves changed in response to recent educational legislation. At the same time, the current study suggests the need to include a number of other activities in studies of African American family literacy practices, along with shared storybook reading.

Finally, the current project supplements prior research on low-income African American families by providing a more recent and more representational sample of African American families. This study also contributes to a fuller understanding of African American families by focusing on rural, as opposed to urban, families. As mentioned previously, there is still a rather small amount of research on rural African Americans. Therefore, this study, along with the larger Family Life Project, helps to fill this gap in the literature.

### **Limitations and Future Directions**

A few variables of interest were found to be predictive of family literacy practices in African American families. For instance, child language was found to predict the frequency of both child and joint literacy practices in these families. Similarly, variables of maternal employment, education, and age all predict child, joint, and maternal literacy practices, respectively. However, the total amount of variance accounted for by these variables never exceeds 11%. Clearly, there are a number of other variables not included in the current analyses that contribute more substantially to the overall variance in the frequency of literacy practices. Further research is needed to examine what other constructs may more accurately predict the literacy activities in these families. Inclusion of these additional variables will provide a fuller picture of the constellation of factors that may contribute to the frequency of literacy practices within these homes. A discussion of some of these possible factors is provided below.

First, literacy levels of mothers were not entered into the model, although they could be a potentially powerful predictor. The language skills of children were found to be particularly influential on the frequency of both child and joint literacy behaviors. In a similar fashion, the literacy skills of mothers may account for a significant portion of the variance in literacy practices observed in these families. Other research indicates that maternal education is predictive of child literacy skills and school readiness (Burchinal et al., 2002; Hart & Risley, 1995). Several scholars suggest that more educated mothers are more likely to engage in literacy practices with their children, which in turn leads to greater academic preparedness on the part of their children. In line with this view, maternal education was found to be predictive of mother-child joint literacy practices. However, maternal education was not found to be associated with either child literacy or maternal literacy practices. It is possible that overall

levels of education masked differences in maternal literacy skill, which could predict child literacy or maternal literacy practices. Further research will be necessary to test this hypothesis.

In addition to the literacy skills of mothers, demographic information on fathers and other caregivers in the home could potentially account for more variance in the current sample. As mentioned earlier, fathers and other individuals in the home often read stories to young children, in addition to, or in place of mothers (Britto et al., 2002; Dickinson & DeTemple, 1998). Without including any information on other adults in the home, the current study cannot determine if these factors are predictive of family literacy practices. It may also be important to gather information on other caregivers in the lives of these children, who assist in raising them, and who may be involved in various educational activities in the home. Both Stack (1975) and Vernon-Feagans (1996) note the extensive kin networks in rural Black families in the South. If children have extended and consistent contact with other family members, in addition to mothers and fathers, the educational levels, income levels, age, and employment status of such individuals could be just as influential as that of their own parents.

Additionally, parental beliefs regarding child development and the role of parents in educating children could be a significant predictor of family literacy practices, although they were not entered into the current model. It is quite plausible that parents who believe that it is their parental duty to be the primary educators of their children will engage more frequently in literacy practices with their children or encourage their children to engage in literacy practices alone. Similarly, if parents believe that the education of children is a process that begins in the home and continues at school, they may engage in literacy practices with their preschool-aged children more frequently than parents who believe that education begins at school. Relatedly, research by Purcell-Gates (1996) suggests that beliefs about child development affect the

frequency of family literacy practices. She found that the low-income parents in her study engaged in literacy practices four times more often with their children once they began formal schooling. While she did not directly test this hypothesis, her findings suggest that low-income parents believe that literacy learning should occur in the home in conjunction with schooling, though not before.

There are also some relationships between maternal, child, and household characteristics and literacy practices that remain unclear and warrant further examination. In particular, it is not clear why the employment variables included in this study predict opposite patterns in child literacy practices. Additional employment variables could be added into the existing model to help provide an accurate understanding of impact of maternal employment on child literacy practices. For instance, an examination of the type of shift worked could provide additional insights. Children whose mothers work night shifts or other nonstandard hours may engage differ in literacy practices from children whose mothers work during the day. Similarly,

Other types of methodologies could provide a fuller picture of the nature of family literacy practices as well. For instance, a longitudinal study that follows children into school entry and early elementary school would certainly provide school teachers, administrators, and parents with useful information on how literacy practices within the home may influence school literacy skills. Ethnographic work could also provide insight into how these families perceive their own practices. This type of research could further the body of research on family literacy practices by providing insight beyond *how* these families participate in certain literacy practices, but also *why*. Only through the combination of various pieces of information, gathered from multiple types of methodologies, will we be able to more fully understand the range of dynamics involved in literacy practices for African American families.

## References

- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Bloome, D., Champion, T., Katz, L., Morton, M.B, Muldrow, R. (2001). Spoken and written narrative development: African American preschoolers as storytellers and storymakers. In *Literacy in African American Communities*. A.G, Kahmi, K.E. Pollock, & J.L. Harris, eds. Mahwah, NJ: Lawrence Erlbaum Associates.
- Bloome, Willett, Katz, Wilson-Keenan, & Solsken (2000). Interpellations of family/community and classroom literacy practices. *The Journal of Educational Research*, 93, 155-163.
- Bradley, R.H. Corwyn, R., McAdoo, H.P., & Coll, G.C. (2001). The home environments of children in the United States part I: Variations by age, ethnicity, and poverty status. *Child Development*, 72, 1844-1867.
- Britto, P.R., Fuligni, A., & Brooks-Gunn, J. (2001). Reading, rhymes, and routines: American parents and their young children. In N. Halfon, K.T. McLearn, & M. A. Schuster. (Eds.), *Childrearing in America: Challenges facing parents with young children* (pp. 117-145). New York: Cambridge University Press.
- Brooks-Gunn, J., Klebanov, P.K., & Duncan, G.J. (1996). Ethnic differences in children's intelligence test scores: Role of economic deprivation, home environment, and maternal characteristics. *Child Development*, 67, 396-408.
- Burgess, S.R., Hecht, S.A., & Lonigan, C.J. (2002). Relations of the Home Literacy Environment (HLE) to the Development of Reading-Related Abilities: A One-Year Longitudinal Study. *Reading Research Quarterly*, 37, 408-426.
- Burchinal, M. R., Peisner-Feinberg, E., Pianta, R. C., & Howes, C. (2002). Development of academic skills from preschool through second grade: Family and classroom predictors of developmental trajectories. *Journal of School Psychology*, 40, 415-436.
- Bus, A.G., van Ijzendoorn, M.H., & Pellegrini, A.D. (1995). Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research*, 65, 1-21.
- Children's Defense Fund. (1994). *Wasting America's future: The Children's Defense fund report on the costs of child poverty*. Boston: Beacon Press.
- Coplan, R.J., Barber, A.M., & Lagace-Seguin, D.G. (1999). The role of child temperament as a predictor of early literacy and numeracy skills in preschoolers. *Early Childhood Research Quarterly*, 14, 537-553.

- Craig, H.K., & Washington, J. (2004). Grade-related changes in the production of African American English. *Journal of Speech, Language, and Hearing Research, 47*, 450-463.
- Diamond, K.E., Gerde, H.K., Powell, D.R. (2008). Development in early literacy skills during the pre-kindergarten year in Head Start: Relations between growth in children's writing and understanding of letters. *Early Childhood Research Quarterly, 23*, 467-478.
- Dickinson, D.K., & DeTemple, J. (1998). Putting parents in the picture: Maternal reports of preschooler's literacy as a predictor of early reading. *Early Childhood Research Quarterly, 13*, 241-263.
- Dickinson, D.K. & McCabe, A. (2001). Bringing it all together: The Multiple origin, skills, and environmental supports of early literacy. *Learning Disabilities Research & Practice, 16*, 186-202.
- Dickinson, D.K., & Snow, C. E. (1987). Interrelationships among prereading and oral language skills in kindergartners from two social classes. *Early Childhood Research Quarterly, 2*, 1-25.
- Ehri, L.C., Nunes, S.R., Willows, B.V., Schuster, Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading Research Quarterly, 36*, 250-87.
- Evans, M.A., & Shaw, D. (2008). Home grown for reading: parental contributions to young children's emergent literacy and word recognition. *Canadian Psychology, 49*, 89-95.
- Field, T., Hernandez-Reif, M., & Diego, M. (2006). Intrusive and withdrawn depressed mothers and their infants. *Developmental Review, 26*, 15-30.
- Gartstein, M. A., & Rothbart, M. K. (2003). Studying infant temperament via the Revised Infant Behavior Questionnaire. *Infant Behavior and Development, 166*, 1-23.
- Gee, J. (1989). What is literacy? *Journal of Education, 171*, 18-25.
- Goldsmith, H. H. (1996). Studying temperament via construction of the Toddler Behavior Questionnaire. *Child Development, 67*, 218-235.
- Graue, E. (2010). Reimagining Kindergarten. *The Education Digest, 75*, 28-34.
- Hammer, C.S. & Weiss, A. L. (2000). African American Mothers' Views of Their Infants' Language Development and Language-Learning Environment. *American Journal of Speech-Language Pathology, 9*, 126-140.
- Hart, B. & Risley, T. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore, MD: Brookes Publishing.

- Heath, S.B. (1983). *Ways with Words*. Cambridge, United Kingdom: Cambridge University Press.
- Huttenlocher, J., Haight, W., Bryk, A., Seltzer, M., & Lyons, T. (1991). Early vocabulary growth: Relation to language input and gender. *Developmental Psychology, 27*, 236-248.
- McCartney, K. (1984). Effect of quality of day care environment on children's language development. *Developmental Psychology, 20*, 244-260.
- National Institute of Child Health and Human Development, Early Child Care Research Network. (2000). The relation of child care to cognitive and language development. *Child Development, 71*, 960-980.
- Noel, M., Peterson, C., & Jesso, B. (2008). The relationship of parenting stress and child temperament to language development among economically disadvantaged preschoolers. *The Journal of Child Language, 35*, 823-843.
- Pancsofar, N. & Vernon-Feagans, L. (2006). Mother and father language input to young children: Contributions to later language development. *Journal of Applied Developmental Psychology, 27*, 571-587.
- Pancsofar, N., Vernon-Feagans, L., Odom, E., & Roe, J.R. (2006). Family relationships during infancy and later mother and father vocabulary use with young children. *Early Childhood Research Quarterly, 23*, 493-503.
- Phillips, M., Brooks-Gunn, J., Duncan, G.J., Klebanov, P., & Crane, J. (1998). Family background, parenting practices, and the Black-White test score gap. In C. Jencks & M. Phillips (Eds.). *The Black-White test score gap*. (pp.103-145). Washington, D.C.: Brookings Institution Press.
- Poe, M.D, Burchinal, M. & Roberts, J. (2004). Early language and the development of children's reading skills. *Journal of School Psychology, 42*, 315-332.
- Purcell-Gates, V. (1996). Stories, coupons, and the "TV guide:" relationships between home literacy experiences and emergent literacy knowledge. *Reading Research Quarterly, 31*(4), 406-428.
- Putnam, S.P., Garsten, M.A., & Rothbart, M.K., (2006). Measurement of fine-grained aspects of toddler temperament: The Early Childhood Behavior Questionnaire. *Infant Behavior and Development, 29*, 386-401.
- Qualls, C.D. (2001) Public and personal meanings of literacy. In *Literacy in African American Communities*. A.G, Kahmi, K.E. Pollock, & J.L. Harris, eds. Mahwah, NJ: Lawrence Erlbaum Associates.

- Radloff, L.S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.
- Raikes, H., Pan, B.A., Luze, G., Tamis-LeMonda, C.S., Brooks-Gunn, J., Constantine, J., Tarullo, L.B., Raikes, H.A., Rodriguez, E.T. (2006). Mother-child bookreading in low-income families: Correlates and outcomes during the first three years of life. *Child Development, 77*, 924-953.
- Rivers, K. (2005). Rural southern children falling behind in well-being indicators. (Population Reference Bureau Brief). Accessed online December 1, 2011 at: <http://www.prb.org/Articles/2005/RuralSouthernChildrenFallingBehindinWellBeingIndicators.aspx?p=1>.
- Roberts, J., Jurgens, J., & Burchinal, M. (2005). The Role of home literacy practices in preschool children's language and emergent literacy skills. *Journal of Speech, Language, and Hearing Research, 48*, 345-359.
- Rothbart, M. K., & Derryberry, D. (1981). Development of individual differences in temperament. In M. L. Lamb & A. L. Brown (Eds.), *Advances in developmental psychology: volume 1* (pp. 37-86). New York: Guilford.
- Rothbart, M. K., Ahadi, S. A., Hersey, K.L., Fisher, P. (2001). Investigations of temperament at three to seven years: The Children's Behavior Questionnaire. *Child Development, 72*, 1394-1408.
- Scarborough, H.S., & Dobrich, W. (1994). On the efficacy of reading to preschoolers. *Developmental Review, 14*, 245-302.
- Sénéchal, M., & LeFevre, J. (2002). Parental involvement in the development of children's reading skill: A five-year longitudinal study. *Child Development, 73*, 445-460.
- Snow, C.E., Burns, M.S., & Griffin, P. (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Stack, C. (1975). *All our kin: Strategies for survival in a Black community*. New York: NY. Harper & Row.
- Storch, S.A. & Whitehurst, G.J. (2001). The Role of family and home in the literacy development of children from low-income backgrounds. In P. R. Britto, J. Brooks-Gunn (Eds.), *The Role of Family Literacy Environments in Promoting Young Children's Emerging Literacy Skills*. (pp. 53-71). San Francisco, CA US: Jossey-Bass.
- Sulzby, E. & Teale, W.H. (1991). Emergent literacy. In R. Barr, M.L. Kamil, P. Mosenthal, & P.D. Pearson eds. *Handbook of reading research II*. New York, NY: Longman.

- Taylor, D. & Dorsey-Gaines, C. (1988). *Growing up literate: Learning from inner city families*. Portsmouth, NH: Heinemann.
- Teale, W.H. (1986). Home background and young children's literacy development. In W. H. Teale, & E. Sulzby (Eds.) *Emergent Literacy: Writing and Reading* (pp. 173-205). Norwood, NJ: Ablex Publishing Corporation.
- Vernon-Feagans, L. (1996). *Children's Talk in Communities and Classrooms*. Cambridge, MA: Blackwell Publishers.
- Vernon-Feagans, L., Pancsofar, N., Willoughby, M., Odom, E., Quade, A., & Cox, M. (2008). Predictors of maternal language to infants during a picture book task in the home: Family SES, child characteristics and the parenting environment. *Journal of Applied Developmental Psychology, 26*, 213-226.
- Washington, J.A., (2001). Early literacy skills in African-American children: Research considerations. *Learning Disabilities Research & Practice, 16*, 213-221.
- White, K.R. (1982). The relation between socioeconomic status and academic achievement. *Psychological Bulletin, 91*, 461-481.
- Whitehurst & Lonigan. (1998). Child Development and Emergent Literacy. *Child Development, 69*, 848-872.
- Yopp, H. K., & Yopp, R.H. (2009). Phonological Awareness is Child's Play! *Spotlight on Teaching Preschoolers*. Washington, DC: National Association for the Education of Young Children.