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UNDERSTANDING THE HOME LITERACY ENVIRONMENT OF A LOW-
INCOME URBAN COMMUNITY

BY

JENNIFER ANN DUPONT FRECHETTE

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
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MASTER OF ARTS THESIS

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Abstract

The Home Literacy Environment (HLE) is conceptualized as a multifarious interactive experience that occurs across multiple contexts and is a key component in emergent literacy acquisition (Schmitt, Simpson, & Friend, 2011; Wood, 2002). Past researchers have used conservative measures of the HLE that measure only one indicator (e.g. Storybook Title Identification), while others have included broad conceptualizations including demographic variables, parent-child text interactions, playing word games, and visiting the local library (Schmit et al., 2011; Levy, Gong, Hessels, Evans, & Jared, 2006; Lyytinen, Laasko, Poikkeus, 1998; Senechal, LeFevre, Thomas & Daly, 1992). The present study utilized a broad measure of the HLE to understand its relationship with emergent literacy skills for a sample of low-income kindergarten students.

A total of 76 parent participants completed a questionnaire regarding their child's home literacy experiences. Additionally, these children enrolled in kindergarten were assessed on measures of phonological awareness and early literacy skills. Results from the regression analyses suggest that literacy activities conducted in the home environment alone do not significantly explain the variance of phonological awareness or early literacy scores. However, after taking into account demographic variables, the HLE significantly explained an additional 5.3% of the variance in early literacy scores and 3.9% of the variance in phonological awareness scores. These findings indicate that demographic variables explain a large percentage of children's phonological awareness and early literacy scores, and may differentially

impact emergent literacy skills. Implications for educators and school decision-makers are discussed, and suggestions for future research are considered.

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Chapter 1: Introduction

Statement of the Problem

Reading acquisition is commonly referred to as a key to social mobility, educational and economic opportunities, and self-sustainability (Corley, 2003). According to The National Assessment of Educational Progress (2011), only 42% of fourth grade students in the United States scored in the proficient (the standard for all children to meet) or advanced level in their reading achievement, while a staggering 58% of students were considered to be at the basic level (partial mastery) or below-basic reading level. Of the students who fell below the basic reading level, 74% were eligible for free/reduced-price school lunch. Children living in poverty may be exposed to more harmful physical, psychosocial and cognitive risk factors than children not living in poverty (Evans, 2004). These risk factors include less access to resources, higher levels of parental and child stress, noise pollution, less social support, and parents who may be less responsive and demonstrate more authoritarian styles of parenting (Evans, 2004). Research indicates that children's socioeconomic status is predictive of academic achievement, cognitive functioning and language abilities and thus is a key indicator of academic outcomes (Foster, Lambert, Abbott-Shim, & Franze, 2005; McLoyd, 1998).

A traditional view of the responsibilities of compulsory education was to provide students learning opportunities by being read to and taught by teachers who have received extensive training (Barnyak, 2011). Today, children are expected to have basic literacy skills and knowledge before entering kindergarten (Scott-Little, Kagan & Frelow, 2006). These skills are often modeled, explicitly taught, or learned from parents and caregivers in the home and community. Additionally, other factors

such as parental level of education, number of siblings in the home and primary language spoken in the home may play a role in the child's literacy skills and abilities (Dickinson & Snow, 1987; Kelly, Gregory, & Williams, 2001; van Steensel, 2006).

Understanding the specific literacy activities that are being conducted within the home and how these activities are related to specific early literacy skills measured in school is needed. Additionally, the way in which previous researchers have defined and measured the home literacy environment has led to conflicting findings. Some researchers have used narrowly defined measures such as parent knowledge of children's books' titles, and others have used more broadly defined measures that incorporate both formal and casual literacy experiences, as well as social factors (Schmitt, Simpson, & Friend, 2011). Therefore, the proposed research aims to understand a broadly defined home literacy environment and its relation to measures of emergent literacy for kindergarten students living in a small, low-income community.

Critical Review of the Literature

This critical review explores the home literacy environment, its definition, the differential impact of activities on literacy skills, including parent-child reading experiences, and formal and casual literacy activities. The role of socioeconomic influences on literacy is discussed with a brief overview of home environments where two or more languages are used, due to its relevancy for the present sample. Additionally, specific emergent literacy skills and their relationship to the home literacy environment are presented.

The Home Literacy Environment

Studies of the child's home learning environment have shown that many factors contribute to the quality of the literacy environment including the quality of linguistic interactions, access to resources, and learning experiences with parents. These parameters have significant associations with children's emergent literacy skills and language abilities (Burgess, Hecht, & Lonigan, 2002; Delgado-Gaitan, 1992; Durand, 2011; Farver, Xu, Lonigan, & Eppe, 2013; Foster et al., 2005; Loera, Rueda, & Nakamoto, 2011). Most researchers agree that home environments that value and encourage literacy activities, such as engaging in shared reading and providing reading materials, are related to higher levels of school readiness, increased rates of oral language development, expanded vocabularies and increased child motivation to engage in literacy practices (Delgado-Gaitan, 1992; Durand, 2011; Farver, Xu, Eppe, & Lonigan, 2006; Loera et al., 2011). However, elements of the Home Literacy Environment (HLE) such as parent-child book reading may be highly correlated with specific early literacy-related skills such as phonological awareness and word recognition, but not correlated with other skills that may be mediated by the child's age, grade level and other biopsychosocial factors (Levy, Gong, Hessels, Evans, & Jared, 2006; Sénéchal, 2006; Sénéchal & LeFevre, 2002; Sénéchal, Pagan, Lever, & Ouellette, 2008). A more organic and comprehensive way of understanding the activities and events that occur within the child's home environment and how they are related to acquisition of literacy skills are needed.

Past researchers have defined the HLE in numerous ways such as parent-child reading behaviors, parent-child interactions, parent knowledge of story books titles, maternal responsiveness, joint attention, book reading strategies, parental literacy modeling behavior and parental educational level (Burgess et al., 2002; Bus, van Ijzendoorn, & Pellegrini, 1995; Caspe, 2009; Curenton & Justice, 2008; DeBaryshe, 1995; Farver et al., 2006; Hecht, Burgess, Torgesen, Wagner, & Rashotte, 2000; Purcell-Gates, 1996; Sénéchal, LeFevre, Thomas, & Daley, 1998; Schmitt et al., 2011; Stephenson, Parrila, Georgiou, & Kirby, 2008, van Steensel, 2006; Wood, 2002). The lack of specificity and consistency when defining the HLE and its relation to measures of early literacy has led to conflicting findings (Schmitt et al., 2011; van Steensel, 2006). The definition of the HLE utilized for the present study and the reasons for incorporating a more psychosocial model are discussed below.

Definition. The home literacy environment is broadly defined as a multifarious interactive experience that occurs across multiple contexts and is frequently referred to as a key component in emergent literacy acquisition (Schmitt et al., 2011; Wood, 2002). Some researchers have previously defined the HLE by the frequency of library visits, storybook title identification and number of books available in the home (Lyytinen, Laakso, & Poikkeus, 1998; Sénéchal et al., 1998), while others have broadly defined it to include parent-child social interactions, child initiation of activities, and parental modeling of reading activities (Burgess et al., 2002; Levy et al., 2006; Purcell-Gates, 1996; Schmitt et al., 2011; Umek, Podlesek, & Fekonja, 2005; van Steensel, 2006; Wood, 2002). Overall, there have been three main components of the HLE that have been consistently identified as important constructs to assess: the

amount of reading being done in the home, the types of activities engaged in, and the resources that are available. Past research supports the need for a more broadly defined HLE when examining differences that exist in the HLE for children from varying socioeconomic status backgrounds and its relation to emergent literacy skills (Schmitt et al., 2011; van Steensel, 2006).

Differential Impact of Activities on Literacy Skills. Sénéchal and LeFevre's (2002) Home Literacy Model divides home literacy activities into two separate categories. The first category refers to informal literacy activities such as storybook reading, parent-child discussions, and visits to the library. The second category refers to formal literacy activities such as when parents explicitly teach children the alphabet or how to write their name. Senechal and LeFevre (2002) explained:

Informal literacy activities are those for which the primary goal is the message contained in the print, not the print per se. Consider a parent reading a bedtime story to his or her child. The attention of the parent and child is surely on the story contained in the print and illustrations (Baker, Fernandez-Fein, Scher, & Williams, 1998). While reading, the parent may expand on the meaning of the story and/or the child may ask questions about the meaning of certain words (e.g., Senechal, Cornell, & Broda, 1995). In these types of interactions the child is exposed to printed material, but the exposure is informal. On the other hand, formal literacy activities are those for which parent and child focus on the print per se. Consider the same parent reading an alphabet book to the same child. In this instance the parent may focus on the print in the book by talking

about letters or by providing the name and the sound of specific letters (p.445-446).

Informal activities have been documented as correlated with measures of oral language both concurrently and over time (Sénéchal et al., 1998; Sénéchal & LeFevre, 2002). Formal activities have been found to be highly correlated with measures of written language such as print concepts, alphabet knowledge, spelling structures and decoding, whereas informal activities does not account for a significant portion of the variance in written language performance for kindergarten children (Sénéchal et al., 1998). These findings allow researchers to associate specific activities in the home with corresponding components of early literacy. Additionally, these findings are analogous to those in Eastern societies that have been replicated with other languages (Chen, Zhou, Zhao, & Davey, 2010).

A recent study conducted by Schmitt et al. (2011) evaluated the relative efficacy of conservative and broad measures of the HLE for predicting language comprehension for infants (ages 16-21 months of age). The researchers found that a broader measure of the HLE as measured by the Home Literacy Environment Questionnaire (Umek et al., 2005) accounted for 31% of the variance in receptive vocabulary. Comparatively, a more restricted measure of the HLE (measured by the Children's Title Checklist) did not significantly contribute to the variance of receptive vocabulary after controlling for socioeconomic status. Schmitt et al. (2011) suggests, "the definition of an optimally supportive HLE is not static but rather changes in concert with children's developing linguistic and cognitive capacities" (p. 428). The present study utilized a broadly defined HLE that combines formal (e.g. practicing

letter names or words) and informal (e.g. storybook reading) literacy activities in addition to variables such as demographic characteristics, parent's reading abilities, and dominant language used in the home. These characteristics are important to assess because they may mediate children's literacy skills and learning opportunities.

Formal Literacy Experiences. Research has shown that when parents are engaged in instructional activities with their children, such as teaching them how to print their name and the letter sounds associated with the alphabet, children learn different literacy skills than those who engage in only informal or casual literacy activities (Senechal & LeFevre, 2002). Senechal (2006) refers to the term formal to indicate that the focus of the activity is on the structure of the written language, but it does not imply that parents need to engage their child in formally structured activities that are likely to occur within a school environment. Parents may feel pressured to make every experience into an educational lesson, which may not be beneficial or enjoyable for the parent or child. Neumann and Neumann (2009) argued for a "middle road" approach where parents engage in differing activities such as joint writing, print referencing, and in literacy-play based settings.

Evans, Shaw, and Bell (2000) found that parent report of activities such as learning letter sounds and names and printing letters predicted phonological sensitivity, knowledge of letters, and their letter sounds after controlling for the child's age, parental educational background and the child's ability whereas book-reading did not predict these outcomes. The frequency (e.g. frequency of teaching the child to read words) and emphases on teaching (e.g. teaching the child to read by associating words with letters, teaching the child to read by associating words with pictures, and

helping the child to sound out letters and/or groups of letters) are important facets that need to be distinguished when defining formal activities (Foy & Mann, 2003). Parent report of the frequency of teaching their child literacy skills is a good predictor of word reading in Grade 1, whereas development of rhyme awareness is fairly independent of formal instruction (Foy & Mann, 2003; Senechal, 2006; Senechal & LeFevre, 2002). Thus, the inclusion of both formal and casual literacy experiences may be needed to help students learn different skills associated with emergent literacy.

Casual Literacy Experiences. Casual literacy activities are similar to informal activities whereas the child is exposed to written language incidentally (Senechal, 2006). Research suggests a variety of casual or informal activities are related to improved early literacy skills including storybook reading, dramatic play, games, and library visits (Roskos, Christie, Widman, & Holding, 2010). While a parent may initiate these activities, other activities that may not involve a parent or siblings may provide further literacy skill development. These activities may include playing games that require some basic literacy skills, listening to a conversation, and watching educational television.

Television shows such as *Sesame Street* and *Reading Between the Lions* may provide children exposure to word and world knowledge (Mares & Pan, 2013; Uchikoshi, 2006). A meta-analysis conducted with children from various socioeconomic backgrounds across 15 countries revealed that children who watched *Sesame Street* had a greater knowledge of basic literacy and numeracy skills compared to those who did not (Mares & Pan, 2013). While all educational television is not equally beneficial, findings suggest television shows geared towards children and that

are classified as educational, can lead to increased letter-word skills, number skills, receptive vocabulary, and school readiness for low to moderate income monolingual and bilingual children (Wright et al., 2001).

As a child becomes a more skillful reader, casual literacy activities become indirectly associated with reading through early language skills (Senechal, 2006). Parents who read to their child frequently in preschool may directly improve their child's receptive vocabulary in first grade (Hood, Colon, & Andrews, 2008). Carter, Chard, and Pool (2009) suggest using the *Family Strengths Model* to increase literacy activities into everyday interactions. The model involves strategies such as creating literacy opportunities, modeling reading and language, increasing interactions and dialogue between the parent and child, while utilizing family strengths. Including literacy activities with typical events within the daily lives of families may provide a positive influence on children's emergent literacy skills. Purcell-Gates (1998) explains,

“In the United States, where the abilities to read and write are essential to economic and social success, many children are born into a world of written language. Their worlds abound with print: signs, menus, forms, directories, newspapers, regulations, instructions, memos, letters, calendars, bills, schedules, and books. Without assigning value-laden labels to these different environments such as “rich” or “deficit-ridden,” we must acknowledge these print-experience differences and account from them in our reading and writing instructions from the very beginning of formal instruction” (p.54-55).

Thus non-traditional ways of defining reading, writing and other learning experiences should be considered because they aid in children's knowledge of these emergent literacy skills. While these various activities have differing influences, the most widely studied home literacy activity continues to be parent-child reading experiences.

Parent-Child Reading Experiences. One aspect of the HLE that has supported the improvement of emergent literacy skills is parent-child reading experiences (Bus et al., 1995; DeBaryshe & Binder, 1994; Wood, 2002). The benefits of children and parents engaging in reading experiences are numerous and include children's increased interest in reading, exposure to grammatical forms of written language, letter-sound awareness, and exposure to technical vocabulary (Barnyak, 2011; Burgess et al., 2002; Bus et al., 1995; DeBaryshe & Binder, 1994; Hargrave & Senechal, 2000; Scarborough, Dobrich, & Hager, 1991). Young children who engage in story-book reading with their parents are exposed to complex sentence structures, world knowledge, and words that are not typically learned through dialogue and interactions with parents (Martini & Sénéchal, 2012; Sénéchal et al., 2008). Bus et al. (1995) conducted a quantitative meta-analysis of 29 studies and found an overall effect size ($d=0.59$) for the frequency of reading that explained approximately 8% of the variance in overall outcome measures. Frequency of book reading was positively related to reading achievement ($d=.55$), emergent literacy ($d=.58$) and language skills ($d=.67$). These results revealed that despite parental literacy abilities and socioeconomic status, the more frequently and the earlier the child is read to by a parent, the higher the child's literacy skills and outcomes (Bus et al., 1995). While these conclusions provide insight into the effects of parent-child reading experiences, caution is

warranted when using home reading experiences as the sole predictor of emergent literacy outcomes. Scarborough and Dobrich's (1994) meta-analysis of the influence of parent-child reading experiences on early literacy measures concluded that book reading is not strongly associated with the occurrence of reading difficulties, rather they propose socioeconomic status may be a better indicator.

Socioeconomic Influences on Literacy Skill Acquisition.

Current research has demonstrated a moderate to strong correlation between children's early narrative skills and later literacy development (Lever & Sénéchal, 2010); however, children from lower socioeconomic status backgrounds may be at a disadvantage given evidence that significant delays in narrative skills are common (Hecht et al., 2000). A child from a lower socioeconomic status home is more likely to be exposed to fewer words, less complex vocabulary and is given more directives than their higher socioeconomic counterparts, resulting in an estimated 30 million word gap by the time the child turns four years of age (Hart & Risley, 1995).

Children who are in poverty may be at increased risk for poor educational outcomes such as dropping out of high school due to decreased literacy skills. In a 1998 testimony to the U.S. Congress, Dr. Reid Lyon (an expert in the field of literacy) explained, "The educational and public health consequences of this level of reading failure are dire. Of the ten to fifteen percent of children who will eventually drop out of school, over seventy-five percent will report difficulties learning to read" (as cited in McCardle & Chhabra, 2004). Martinez, DeGarmo, and Eddy (2004) found that students who drop out of high school are more likely to experience poor health

outcomes, unemployment, low income and a general overrepresentation in the prison systems.

A direct impact on children's literacy development may exist when parents are unable to read in English, have lower levels of education, and have low literacy skills (Loera et al., 2011; Perry, Kay, & Brown, 2008; Snow, Burns, & Griffin, 1998; Yarosz & Barnett, 2001). Socioeconomic indicators such as parental level of education, family income and occupational status provide educators and researchers with a general understanding of the families 'socioeconomic level', however, mediating factors are important to consider. Foster et al. (2005) identified factors such as financial resources, parental attitudes toward education, children's daily interactions with parents, contextual factors, social support, and other social risk factors as key elements in understanding the effects of the home environment on the child's literacy skills.

Purcell-Gates (1996) conducted a descriptive study that analyzed the different types of print and frequency of print use among low-socioeconomic families and its relationship with child knowledge of written language. She found that families averaged less than one instance of actual reading and writing (0.76) per hour. Phrasal/clausal text was the most frequently read material (e.g. coupons, cereal boxes, TV guides) and families utilized print most often for entertainment purposes (e.g. reading a novel, doing a cross-word, reading a TV guide). Children learned a basic knowledge of the principles of written language to a greater degree when there were higher levels of child-maternal print interactions in the home. This relationship was mediated by maternal interactions. Children who observe their family members

engage in written text may gain an understanding that print is used for communication, learning, and informational purposes, as well as for pleasure and entertainment (Purcell-Gates, 2006). Thus, in order to gain an understanding of the HLE, measures assessing many types of print and resources in the home, not only book availability, is necessary.

A review conducted by Bhattacharya (2010) elucidates two frameworks, the psychosocial and sociocultural perspectives, which have been used to explain the relationship between poverty and reading achievement. Bhattacharya (2010) explained:

“The psychosocial perspective states that family income is predictive of reading achievement and that poverty has an adverse effect on reading achievement. Conversely, the sociocultural perspective asserts that lower reading achievement is not due to household poverty but rather is often due to a paucity in-home literacy experiences. Poor students with good in-home literacy experiences tend to exhibit higher reading achievement” (p. 135).

Understanding risk and protective factors associated with low socioeconomic status households in relation to the HLE may provide insights for researchers, policy makers and school administrators in developing interventions to increase children’s emergent literacy skills before they begin their formal education. It is also important to understand risk and protective factors related to this population that may lead to resiliency when facing these adverse contexts, such as high self-esteem, positive maternal and paternal parenting, coping skills, and the child’s ability to self-regulate emotions associated with adverse circumstances (McLeod & Shanahan, 1993;

McLeod & Shanahan, 1996). For example, parents with low literacy skills may value children's literacy artifacts and events even more so than parents with higher literacy abilities because they understand the hardships associated with the lack of these skills and abilities (Fitzgerald, Spiegel, & Cunningham, 1991). Additionally, siblings have been found to play a role in the development of literacy abilities. Kelly, Gregory, and Williams' (2001) findings suggest that siblings, especially for English language learners, may play an important role in modeling literacy activities and supporting their brothers and sisters second language acquisition.

Second Language Literacy. Two-thirds of children in the United States who have limited English proficiency come from low-income households (Capps, Fix, Murray, Ost, Passel, & Hernandez, 2005). However, there are many factors that are associated with the home literacy environment and how well a child learns a second-language. While an extensive review of English-Language Learners is beyond the scope of this review, second language literacy skills are briefly discussed due to its relevancy to the participants included in this study. Dixon et al. (2012) conducted a meta-analysis based on foreign-language education, child language research, sociocultural studies, and psycholinguistics disciplines and found that greater exposure and immersion into second-language activities may be optimal for second-language acquisition, whereas those with little exposure may need more explicit instruction in order to learn the language. Parental preference of language is also related to children's language proficiency in both languages, however preferred language of siblings may play a greater role in the child's English proficiency (August et al., 2006). Therefore, in order to become proficient in English it is not necessary to have

English-speaking parents. Surprisingly, research has supported the need of home, social, and community support and instruction to maintain first-language (Spanish) skills and abilities for children who learn English as a second language at a young age to a greater degree than their second language (Duursma et al., 2007).

Children's first language is inextricably related to their abilities and skills in their learning of a second language. August et al. (2006) reported, "first-language reading skills are related to second-language reading skills, but that children must have first-language literacy in the skill for this relationship to exist; oral proficiency in the first language is not sufficient" (p.362). Furthermore, instruction in Spanish and English may be most beneficial instead of instruction in only one language (August et al., 2006). These findings suggest instruction at home and school may be optimal when students are learning a second language. As noted previously, both informal and formal literacy activities in both languages may impact specific literacy skills differentially.

Emergent Literacy

Emergent literacy involves the skills, knowledge, and attitudes that are fundamental to understanding conventional forms of reading and writing (Whitehurst & Lonigan, 1998). The skills associated with emergent literacy include alphabet knowledge, print concepts, word knowledge, visual-perceptual skills, phonological awareness skills, early language comprehension, production, story-telling and pretend reading and writing (Bus et al., 1995; Pellegrini & Galda, 1993; Caspe, 2009; Curenton & Justice, 2008; Schmitt et al., 2011; Whitehurst & Lonigan, 1998).

Ehri & McCormick (1998) identified five phases associated with the development of word reading processes. Each phase is characterized by the learner's understanding of alphabetic word reading and the strategies they use, such as decoding, prediction, analogizing and sight word reading (Ehri, 2005). The first phase is called the pre-alphabetic stage, which is typical in pre-school and kindergarten. Children in this phase have very limited knowledge of the alphabetic letters and how they relate to phonemes. Children may use a wide variety of strategies to "guess" at words such as using the context in which the word is presented. Students in this pre-alphabetic stage benefit from instruction geared at learning/practicing capital and lower case letters, phonemic awareness, and letter-sound relationships. The second phase is the partial-alphabetic phase that is typical in kindergarten and first grade. Students typically use familiar letters and contexts to guess the identity of words, recognize some words by sight, and know the sounds of consonants that are common in the language. However, these students may not have learned to decode words, make comparisons between words, use the left to right reading orientation when reading, and may possess only partial letter-sound relations (Ehri & McCormick, 1998).

Understanding the continuum of literacy acquisition may be helpful for parents who are trying to teach their child to read. Book reading and engagement in literacy activities between parents and their children, especially during the early elementary years, exposes children to grammatical forms of written language and vocabulary, and allows for literacy skill building that significantly improves child emergent literacy outcomes (Burgess et al., 2002; Bus et al., 1995; Farver et al., 2006). Activities

conducted in the home such as parent-child book reading and writing activities, teaching letter names and sounds, and drawing the child's attention to various types of print support increases skill development in areas of phonological awareness, alphabetic knowledge, print concepts, vocabulary development and word recognition (Evans & Shaw, 2008). Frijters, Barron, and Brunello (2000) found that home literacy activities and child literacy interests of kindergarten students accounted for 21% of the variance of expressive vocabulary measures and 18% of the variance on a letter-name and letter-sound measure of early written language. Longitudinal studies have identified a positive correlation between phonological awareness and language abilities at an early age and later achievement in reading (Senechal, 2006; Whitehurst, Zevenbergen, Crone, Schultz, Velting, & Fischel, 1999).

Phonological Awareness. Phonological awareness is the ability to identify and manipulate the sounds structure in spoken words (Phillips, Clancy-Menchetti, & Lonigan, 2008; Stahl, & Murray, 1994). Phonics and phonological awareness are not synonymous. Phonics is a method of instruction that helps children understand the relationship between letters in a written language and the speech sounds within the language, which is important for learning to read and write (Ehri & McCormick, 1998.)

Phonological awareness skills may best be thought of as encompassing two dimensions (Runge & Watkins, 2006). The first dimension includes skills such as sounds categorization, blending, segmenting, and the manipulation of speech sounds, whereas the second dimension is uniquely composed of rhyming tasks (Runge & Watkins, 2006). These basic skills are necessary for reading fluency and

comprehension as the student progresses into later grades. Liberman, Shankweiler, and Liberman (1989) posit “awareness of phonological structures is normally lacking in preliterate children and adults; the degree to which it does exist is the best single predictor of success in learning to read” (p.1). Furthermore, children who have strong phonological awareness skills are able to decode words more easily, even when socioeconomic status and intelligence has been controlled for (Niklas & Schneider, 2013). Thus, understanding the home literacy environment and its relationship to phonological awareness for kindergarten students is essential for students to progress to higher literacy skills such as decoding and reading text.

The Alphabetic Principle and Word Identification Skills. The Alphabetic Principle refers to the ability to identify alphabetic letters and the phonemes they represent (Foorman, Chen, Carlson, Moats, Francis, & Fletcher, 2003). Children who understand the relationship between phonemes, letters and words, as well as the mechanics of the writing system, consistently become better readers than children who have not learned these skills (Torgesen & Mathes, 1999). Low achieving and at-risk students may have more difficulty manipulating phonemes and developing awareness of the phonemic structure of language (Pratt & Brady, 1988). Teaching phoneme awareness early, typically in kindergarten and continuing instruction for several years is advantageous and necessary in assisting students acquire and practice these skills. Furthermore, students who enter kindergarten and are able to identify upper and lower case letters are more likely to demonstrate greater skills at the end of kindergarten on measures of phonological processing and word reading (Denton & West, 2002; Molfese et al., 2011).

Purcell-Gates (1998) posits that children begin to learn about written language and its alphabetic nature as they watch their parents at home reading and writing more complex text. Additionally, she found that environments where parents were engaging in reading and writing activities for their or their child's entertainment increased their child's knowledge of the alphabetic principle. Levy et al. (2006) found that orthographic/visual skills are related to reading development over and above their relation to phonology and even suggest that exposure to print should begin at a young age to learn how language is coded within its written display.

Comparative Analysis of the HLE

The *Home Experiences Questionnaire* (Evans, Levy, & Jared, 2001) assesses numerous factors such as frequency of reading activities, engagement in literacy activities as well as parental and child characteristics such as language spoken in the home. In addition, the survey measures the child's independent pursuit of these literacy activities. The items include ratings of the frequency of home literacy activities such as reading chapter books, short illustrated storybooks, and child magazines. Traditional items that have been previously identified in the research as being pertinent when assessing the HLE are included, such as the age the child was first read to, the number of books in the home and the number of days a week the child is read to. Parents are then asked to identify how frequently they have been involved in each literacy activity with their child and how often their child independently pursued these activities.

Levy, Gong, Hessels, Evans and Jared (2006) conducted a principal components analysis for the 28 literacy activities identified in the *Home Literacy*

Experiences Questionnaire for a sample of 364 parents of children ages four to six. The analysis resulted in six principal components that explained approximately 55% of the variance of outcome measures of visual/orthographic knowledge, phonological sensitivity and letter/word recognition (a seventh component emerged that only consisted of one item and later was dropped). The six components consisted of practicing reading and writing, beginning print/book activities, phonics/phonological awareness activities, casual activities with books/print, reading child advanced text, and traditional shared book reading. The researchers asserted that activities that required child involvement (e.g., printing words) were related to print knowledge, whereas being read books was not related to print knowledge (Levy et al., 2006).

An important limitation of study was the lack of generalizability of the sample to other populations. The study's participants were highly educated (72% of mothers and 64% of fathers had received a college diploma or graduate degree), had higher than average incomes (21% had incomes greater than \$100,000), 73% spoke only English in the home, and data was not collected on the participants' ethnic backgrounds. Given the disadvantages that many children living in poverty face, it is important to understand how a broadly defined HLE may impact early literacy skills. Schools may need to be strategic about which subsets of students are targeted for interventions, especially when resources are scarce. Therefore, there is a greater need to understand the HLE for a low-income population at a young age due to the increased risk factors these children may face.

Purpose of the Present Study

In the proposed study, a principal components analysis was conducted for the results of *The Home Literacy Experiences Questionnaire* (Evans et al., 2001) administered to a sample of socioeconomically disadvantaged parents of kindergarten students living in a small urban community. This measure is considered a broadly defined measure of the home literacy environment. Additionally, the survey was utilized to assess the relationship between the HLE and emergent literacy skills as assessed by the Phonological Awareness Literacy Screening for Kindergarten (*PALS-K*). Lastly, a hierarchical regression analysis was employed to provide a more comprehensive understanding of the relationship between the components designated by the PCA and early literacy skills with the consideration of demographic variables.

In summary, the purposes of the proposed study were to:

1. Understand the Home Literacy Environment as measured by the *Home Literacy Experiences Questionnaire* (Evans et al., 2001) for individuals living in a low-income urban community. It was hypothesized that variables of the survey would form different linear combinations (components) from that of a middle-upper socioeconomic sample as measured by Levy et al. (2006).
2. Examine the relationships between the components of the *Home Literacy Experiences Questionnaire* (Evans et al., 2001) and the emergent literacy scores (phonological awareness and early literacy skills) as measured by the PALS-K for this cohort. It was hypothesized that students' engagement in formal literacy activities (e.g. reading out loud, writing a story) would be correlated with early literacy skills and informal literacy activities (book reading, observing parents

printing letters, looking at books) would be more highly correlated with phonological awareness.

3. Examine the relationships that may exist between demographic variables measured by the *Home Literacy Experiences Questionnaire* (Evans et al., 2001) and emergent literacy scores (phonological awareness and early literacy skills). It was hypothesized that demographic variables supported in the literature would provide a more comprehensive understanding of the relationship between the components of the *Home Literacy Experiences Questionnaire* (Evans et al., 2001) and early literacy scores as measured by the PALS-K.

Chapter II: Method

Study Procedure

A sample of 101 participants was recruited from a total sample of 270 parents from a local kindergarten-only elementary school. Two measures were used which will be referred to as the *Home Experiences Questionnaire* (Evans et al., 2001) that parents completed, and the *PALS-K* that assessed children's literacy skills. Participants were recruited by sending English, Portuguese and Spanish packets to the participants' home with their children who were currently enrolled in kindergarten (see Appendix). Additionally, teachers, bi-lingual research assistants, and the student researcher solicited parents who were visiting the school before and after school hours for participation. The packet that was dispersed included the full survey (see Appendix A, B, and C), informed consent forms (see Appendix D, E and F), a flyer explaining incentives and an envelope for parents to return to the school to maintain confidentiality. Parents were asked to send back the completed survey and allow use of their child's literacy assessment scores (*PALS-K*) that were completed in September by school staff by signing the informed consent form. Parents were asked to complete and return all materials back to the school for the teacher to collect.

Teachers collected materials and stored them in a manila folder for the student-researcher to collect. A week following the distribution of the survey, a reminder for parents to complete the questionnaire and consent forms were sent home with the students. The surveys were dispersed in three waves in order to increase participation. Several surveys were returned without a signed informed consent form. These participants were sent home a letter with the informed consent form to be signed and

returned with their student in order for the surveys to be included in the final sample. Parents received a \$5 gift certificate to Target stores as compensation for time spent completing the survey and were automatically entered into a raffle. Three parents were randomly selected to receive a first prize of a \$200 Target gift card, and second and third place prizes of children's books and a Target gift card for \$35 and \$30 respectively. Teachers were given \$5 gift certificates for aiding in the recruitment and data collection processes.

Participants

Parent Participants. A total of 76 parents participated in the study. One hundred and one surveys were returned to the school, however, thirteen of the surveys were duplicates (parents filled out survey twice) and twelve of the surveys were returned without signed consent and were not included in the data analysis. An approximation of the required sample needed based on a medium effect size which is consistent with Levy et al.'s (2006) findings and Cohen's (1992) research, indicates that a sample of 97 individuals would be needed for multivariate analysis using 6 indicators for a medium effect size ($R^2=.13$) and $\alpha=.05$.

The final sample consisted of 76 surveys completed by a parent of a kindergarten student attending a kindergarten-only elementary school. Eighty-six percent of surveys were completed by the child's mother ($n=62$), 7% were completed by the child's father ($n=5$), 8% were completed by both parents ($n=6$), and 1% was completed by someone other than the parent ($n=1$). More than half of households were headed by two-parents ($n=43$), 39% were headed by single-mothers ($n=29$), 1%

were headed by single-fathers (n=1), and 1% stated an unspecified family-unit composition (n=1).

Of those who participated, more than half of the mothers self-identified as Latino, Hispanic, Mexican, or Puerto Rican (n=42) (see Table 1). As seen in Table 1, 49% of fathers identified as Latino, Hispanic, Mexican or Puerto Rican (n=37), 4% identified as White (n=3), 10% identified as Black or African American (n=8), 5% identified as Cape Verdean, and 32% did not identify their ethnicity.

Table 1. *Ethnicity of Parent*

<i>Category</i>	<i>n</i>	<i>Percent</i>
Ethnicity of Mother		
Latino/Hispanic/Mexican/Puerto Rican	42	55.2
White	6	7.9
Black or African American	4	5.3
Pacific Islander	1	1.3
Cape Verdean	2	2.6
Multiethnic	1	1.3
Did not identify/other	20	26.3
Ethnicity of Father		
Latino/Hispanic/Mexican/Puerto Rican	37	48.7
White	3	3.9
Black or African American	8	10.5
Cape Verdean	4	5.3
Did not identify/other	24	31.6

Approximately half of participants (48%) reported a household income of less than \$16,000 per year. According to the United States Department of Health and Human Services, the 2013 poverty guidelines for a family of three is \$19,530. Many of the families reported a household size of greater than three (approximately 65%), which would indicate that the majority of families fell well within the United States poverty-guidelines. Twenty-five percent of participants had yearly household incomes of \$16,000-\$26,000 (n=18), 19% earned \$26,000-\$40,000 a year (n=14), with the

remainder of families earning greater than \$40,000. Table 2 depicts the household income and number of children living in the home for participants who completed both questions.

Table 2. *Household Income by Number of Children Living in the Home*

Number of children living in the home	Income				n
	Under \$16,000	\$16,000- \$26,000	\$26,000- \$40,000	\$40,000- \$55,000	
1	3	4	1	1	9
2	9	4	2	2	17
3	15	4	7	2	28
4	3	4	1	1	9
5	2	1	2	0	5
6	0	0	1	0	1
7	2	1	0	0	3
Total	34	18	14	6	72

Parents reported varied levels of education. Thirteen percent of fathers and mothers respectively, reported their highest level of education was elementary school. Approximately 45% of mothers (n=40) and 43% of fathers (n=33) have reached grade 12 or 13. Additionally, a greater percentage of mothers (20.5%) reported attending community college compared to fathers (4.5%). These figures provide insight into parents' experiences with formal instruction. Frequencies for the highest level of parental educational are presented in Tables 3 and 4.

Table 3. *Mother's Highest Level of Education*

Highest Educational Level	n	Percent
Did not complete elementary school	1	1.4
Elementary School	10	13.7
High school grade10	22	30.1
High grade 12 or 13	23	31.5
Community college	15	20.5
Undergraduate university	2	2.7

Table 4. *Father's Highest Level of Education*

Highest Educational Level	n	Percent
Did not complete elementary school	4	6.0
Elementary School	9	13.4
High school grade10	21	31.3
High grade 12 or 13	27	40.3
Community college	3	4.5
Undergraduate university	2	3.0
Post graduate school	1	1.5

Child Participants. Of the 76 surveys completed, 36% of students were 5 years of age (n=27), 59% were 6 years of age (n=45), 1% was 7 years of age (n=1), and 3% did not report their child's age (n=3). Fifty-three percent of child participants were female (n= 40) and 47% of the participants were male (n=36). Subsequent analyses revealed no gender differences amongst child participants, so this factor is not discussed further. Approximately half of the students attended an early education setting prior to beginning kindergarten (n=40). Twenty-one percent of parents (n=30) identified the setting of their child's early education placement with 40% having attended a day-care setting (n=16), and 32% attended (n=13). The average time spent in an early education setting was 20 months ($M=20.33$) (see Table 5).

Table 5. *Child Participant's Ages and Early Education Setting*

Category	n	Percent
Age		
5 years old	27	35.5
6 years old	45	59.2
7 years old	1	1.3
Did not respond	3	3.9
Attended Early Education Setting		
Yes	40	52.6
No	36	47.4
Early Education Setting		
Daycare	16	40.0
Headstart	13	32.5
Pre-Kindergarten	4	10.0
Did not specify	10	25.0

Parents were asked to identify the languages used at home with their child. Approximately 43% of parents identified that they used two or more languages at home (n=33) and one parent identified using three languages at home. Of those who spoke more than one language, approximately 85% spoke English and Spanish (n=28). The remainder of parents who responded (n=42) reported using only one language at home. Fifty- percent of parents reported using Spanish-only (n=23), 38% of parents reported using English-only (n=16), and 7% reported using Creole-only within the home (n=3).

Parents were asked the language the child most easily understands, speaks, and the language of books the child usually looks at or listens to at the home. Figure 1 displays these findings. Most notably, nearly 67% of the children most easily speak English, 20% find Spanish easier to speak, and 12% are comfortable speaking both English and Spanish. The majority of children usually look at books in English at home, with 24% of children listening to or looking at books in Spanish. Measuring this information is an important aspect of this study to learn more about the language used in the home, the languages the child speaks, understands and listens to when engaged in book-reading activities and how these variables may mediate the relationship of literacy activities and early literacy skills as measure by an English literacy screening tool (PALS-K). Figure 1 depicts these findings

Figure 1. *The Languages the Child Understands, Speaks, and Listens to When Engaged in Book-Reading Activities*

Informed Consent. Participants were required to document that they had read and understood the consent form, were at least eighteen years of age, and had a child in kindergarten. The consent form was available in Spanish, Portuguese, and English to ensure understanding. Bi-lingual student researchers and school staff assisted participants with any questions regarding the study itself and the consent forms. The consent form included a basic description of the project as well as any potential for harm, confidentiality, and benefits of participating. Participants were made aware that they could discontinue their involvement at any time. All identifying information was removed from the surveys and participants were assigned a number to ensure confidentiality. An informed consent form is presented in Appendix D-F.

Measures

Two measures were used in the present study. All parent participants completed a questionnaire using a paper and pencil method. The questionnaire assessed their home literacy activities and experiences. Questions were added to learn

more about demographic information and factors that may moderate literacy skills (e.g. attending an early educational setting prior to kindergarten). All children participants completed an assessment in September or October of 2012 that measures basic literacy skills and is part of the school's screening process.

Parent Measures. The *Home Experiences Questionnaire* (Evans et al., 2001) was utilized to investigate numerous factors in the home that influence emergent literacy (see Appendix A). The questionnaire consists of questions that address the basic components of the home environment including the number and ages of siblings in the home, highest level of education reached, occupations for both parents, annual family income and languages used in the household. Two questions were added regarding the parents' ethnicity and three questions were added to gain information about children's experience with early education centers. In addition to these demographic questions, there are 28 items that ask parents to specify the frequency of literacy activities with the child within the home (e.g., reading children's magazines, chapter books, alphabet books, or storybooks; playing educational games or playing computer games involving reading). Of these 28 items respondents were asked to rate how many times they have read different types of books (e.g. alphabet books, books with poems and rhymes, short illustrated children's books) and engaged in literacy activities (e.g. listening to storybook tapes, spelling words) in the past four months based on a Likert scale. The Likert scale required participants to rate these experiences based on the following choices: Never; 1-3 times (maybe once a month); 7-15 times (maybe 2-3 times in a month); 20-30 times (maybe 1-2 times a week); 40-60 times (maybe 3-4 times a week); 80 or more times (about every day). There were

an additional 21 items that measure how often the child initiates literacy activities within the home. However, due to the large number of participants who did not complete these items ($n_{missingrange}=21-27$), the questions were not included in the analysis.

A Spanish and Portuguese version of the survey was created in order to meet the language needs of the community (see Appendix B and C). The Spanish version of the questionnaire was created using a double translation or back-translation procedure done by two bilingual undergraduate research assistants following the procedure of Marín and Marín (1991). The English version was first translated into Spanish, and then the Spanish versions were translated back into English by two separate researchers to avoid crossover effects. This process was done four times due to variations in translation. A bilingual school psychologist and school personnel fluent in Spanish reviewed the final Spanish version to ensure comprehension. The Portuguese version of the survey was translated by the school's trilingual liaison who translates all materials for school staff.

Child Measures. The Phonological Awareness Literacy Screening for Kindergarten (*PALS-K*) is a tool created at the University of Virginia that is commonly utilized for identification of students at risk for reading difficulties (VDOE, 1995). All students attending the elementary school were assessed using the *PALS-K* in September-October 2012. The *PALS-K* assesses Phonological Awareness (rhyme awareness and beginning sound awareness), Alphabet Recognition, Knowledge of Letter Sounds, Spelling, Concept of Words and Word Recognition in Isolation. The Phonological Awareness subtask consists of 10 items in which students identify the

name of an item that rhymes with the target picture's name and an additional 10 items in which students are required to identify the initial sound of the target picture. The Alphabet Recognition subtask requires the student to identify all 26 lower-case letters of the alphabet whereas the Letter Sounds subtask asks students to produce the letter sounds of 23 upper-case letters of the alphabet and three digraphs. The Concept of a Word subtask has students identify words both in and out of context. Finally, the Spelling subtask requires students to spell five Consonant-Vowel-Consonant (CVC) words. Scores for the Phonological Awareness tasks (Rhyme Awareness and Beginning Sound Awareness) were summed to form one score, and tasks falling under the category of Literacy Skills (Alphabet Knowledge, Letter Sounds, Spelling, Concept of Word, and Word Recognition in Isolation) were used to form a second score. Reliability coefficients for individual subtasks demonstrate adequate internal consistency (.79 to .89) and excellent inter-rater reliability (.96 to .99). The *PALS-K* has been standardized based on a sample of 600,000 students and has demonstrated adequate content validity, criterion validity and predictive validity (Invernizzi, Juel, Swank, & Meier, 2011).

Design

The present research study a) investigated the dimensionality of the *Home Experiences Questionnaire* (Evans et al., 2001) for a sample of parents with kindergarten students in a low-income community, b) examined the relationship between the components of the *Home Experiences Questionnaire* (Evans et al., 2001) and kindergarten students' phonological awareness and early literacy skills as measured by the *PALS-K*, and c) explored the relationship between key demographic

variables and students' scores on the *PALS-K*. SPSS was used to conduct the data analyses.

Descriptive statistics were examined for all key demographic variables, the 28 items on the *Home Experiences Questionnaire* and students' *PALS-K* scores. To address the present study's first hypothesis, a principal component analysis was used to better understand the component structure of the *Home Experiences Questionnaire* for the current sample to compare with findings from a previous study conducted with middle to upper SES families (Levy et al., 2006). Once components were identified, standard linear regression analyses were used to determine the relationship between each component and children's scores measuring phonological awareness (rhyme awareness and beginning sound awareness) and early literacy skills (alphabet knowledge, letter sounds, spelling, concept of word, and word recognition in isolation) independently. Lastly, hierarchical linear regression was used to examine the relationship between demographic variables and components of the *Home Experiences Questionnaire* and scores on the *PALS-K*.

Chapter III: Results

Principal Components Analysis of the Home Experiences Questionnaire

SPSS version 21 was used to conduct the Principal Component Analysis (PCA) for the 28 questions that assessed both formal and informal literacy activities conducted with a parent and child. All of the variables were normally distributed with skewness and kurtosis values within acceptable ranges, besides the variable “printing his/her name” being slightly negatively skewed (-1.38). Due to the relatively small sample size, listwise deletion was not recommended for missing data values (Harlow, 2005). The missing value problem is very common in research and has been studied extensively with several recommendations for PCA depending on patterns of the missing data (Ilin & Raiko, 2010). In order to learn if data was missing at random or due to another factor, Little’s (1988) test of missing completely at random (MCAR) was utilized. This method is a conservative estimate with small sample sizes and normally distributed data (Little, 1988). Little’s MCAR test resulted in $\chi^2 = 434.781$, $\alpha = .105$ indicating that the missing values are missing completely at random. Table 6 provides an overview of descriptives and percentages for missing data for each question.

Table 6. *Missing Data Values*

	n	Mean	Std. Deviation	Missing Count	Percent
1. Playing with magnetic letters/letter cards	61	3.61	1.498	15	19.7
2. Practicing letter names, individual words	64	4.61	1.305	12	15.8
3. Watching you print notes	63	3.73	1.322	13	17.1
4. Reading signs or labels	64	4.25	1.321	12	15.8
5. Educational Games (Spill & Spell, Boggle, etc.)	64	3.55	1.593	12	15.8
6. Listening to books you read	66	4.20	1.459	10	13.2
7. Tracing or copying letters or words	65	4.82	1.171	11	14.5
8. Listening to storybook tapes	61	2.87	1.698	15	19.7
9. Looking at magazines/books	65	4.00	1.403	11	14.5
10. Learning letter sounds/word parts	65	4.45	1.275	11	14.5
11. Visiting public library	65	2.86	1.722	11	14.5
12. Playing computer games involving reading	66	3.79	1.593	10	13.2
13. Printing his/her name	64	5.19	1.111	12	15.8
14. Using children's picture dictionary	63	2.97	1.796	13	17.1
15. Watching educational t.v. (e.g. Sesame Street)	62	4.40	1.311	14	18.4
16. Using alphabet books	64	4.14	1.531	12	15.8
17. Listening to rhyming words/rhyming stories/poems	63	3.83	1.612	13	17.1
18. Writing a note or little story	66	3.70	1.529	10	13.2
19. Reading out loud	60	4.42	1.430	16	21.1
20. Spelling words	65	4.25	1.447	11	14.5
21. Doing word games (e.g. word find)	65	3.66	1.632	11	14.5
22. ABC/alphabet/letter sound books	70	4.03	1.474	6	7.9
23. Books with poems or stories that rhyme	68	3.38	1.350	8	10.5
24. Long "classic children's books (eg. , Black Beauty, Wizard of Oz, Harry Potter)	65	2.85	1.622	11	14.5
25. Chapter books (e.g., shortened simplified classic books; Babysitters' Club)	64	2.23	1.499	12	15.8
26. Illustrated non-fiction children's books (e.g. The American Revolution from A to Z)	64	2.64	1.722	12	15.8
27. Short illustrated children's books (eg., Red Riding Hood, Bernstein Bears)	67	3.70	1.414	9	11.8
28. Children's magazines (eg., Chirp Chickadee, Sesame Street Magazine	66	2.88	1.750	10	13.2

Based on these findings, model-based methods were used to create a "complete" data set. Methods such as the conditional mean replacement method (regression imputation) and maximum likelihood using the EM algorithm with moderate amounts of missing data (approximately 20%) are preferable due to their superiority to other approaches (e.g. single component projection) when important combinations of data are missing (Nelson, Taylor, & MacGregor, 1996; Pigott, 2001). In this analysis, the maximum likelihood method using the EM algorithm was utilized. This method focuses on the parameters estimates of the means and the variance-covariance matrix to obtain model parameters (Pigott, 2001). Table 7 depicts the

transformed data's means and standard deviations.

Table 7. *Transformed data using the Maximum Likelihood Method*

	n	Mean	Std. Deviation
1. Playing with magnetic letters/letter cards	76	3.73	1.556
2. Practicing letter names, individual words	76	4.63	1.205
3. Watching you print notes	76	3.80	1.247
4. Reading signs or labels	76	4.25	1.218
5. Educational Games (Spill & Spell, Boggle, etc.)	76	3.61	1.506
6. Listening to books you read	76	4.16	1.389
7. Tracing or copying letters or words	76	4.78	1.100
8. Listening to storybook tapes	76	2.95	1.630
9. Looking at magazines/books	76	3.97	1.313
10. Learning letter sounds/word parts	76	4.45	1.180
11. Visiting public library	76	2.86	1.594
12. Playing computer games involving reading	76	3.78	1.485
13. Printing his/her name	76	5.21	1.028
14. Using children's picture dictionary	76	2.97	1.660
15. Watching educational t.v. (e.g. Sesame Street)	76	4.46	1.203
16. Using alphabet books	76	4.13	1.408
17. Listening to rhyming words/rhyming stories/poems	76	3.90	1.516
18. Writing a note or little story	76	3.69	1.426
19. Reading out loud	76	4.46	1.319
20. Spelling words	76	4.27	1.342
21. Doing word games (e.g. word find)	76	3.67	1.512
22. ABC/alphabet/letter sound books	76	4.07	1.433
23. Books with poems or stories that rhyme	76	3.37	1.289
24. Long "classic children's books (eg. , Black Beauty, Wizard of Oz, Harry Potter)	76	2.87	1.561
25. Chapter books (e.g., shortened simplified classic books; Babysitters' Club)	76	2.29	1.414
26. Illustrated non-fiction children's books (e.g. The American Revolution from A to Z)	76	2.62	1.646
27. Short illustrated children's books (eg., Red Riding Hood, Bernstein Bears)	76	3.76	1.362
28. Children's magazines (eg., Chirp Chickadee, Sesame Street Magazine)	76	2.88	1.664

All data analyzed for the PCA was done with the transformed data set. The initial PCA with orthogonal rotation (varimax) resulted in 5 components for the 28 questions that measure formal and informal literacy activities on the *Home Experiences Questionnaire* (Evans et al., 2001). A five-component structure was retained after examination of the scree plot (Cattell, 1966), five of the eigenvalues

being greater than 1.0 (Guttman, 1955; Kaiser, 1970), and the percentage of variance that was extracted by the five dimensions was greater than 50% (Harlow, 2005). The five components explained approximately 68% of the variance. All communalities were greater than .50 and met Kaiser-Meyer-Olkin's measure of sampling adequacy (MSA=.761) and Bartlett's test of Sphericity ($\chi^2 = 1650.104$, $\alpha = .0005$). Bartlett's test of Sphericity is recommended when working with small sample sizes (e.g. $n \leq 100$), and significant results are important before utilizing PCA because it tests the null hypothesis that the variables in the population correlation matrix are uncorrelated (Stevens, 1992). Stevens (1992) recommends a more conservative approach when interpreting factor solutions when the sample size is small by doubling the correlation coefficient at $\alpha = .01$ (two-tailed test) that results in a critical value of .572 for a sample size of 80. Eight items did not meet the $|\lambda| \geq .572$ criteria and were removed (items 3, 6, 9, 12, 16, 17, 18 and 22). Additionally, the fifth component consisted of one item "Visiting public library" (item 11) and was removed.

The final PCA resulted in four components that consisted of 19 items and explained approximately 71% of the variance. The four components were retained after examination of the scree plot and all four eigenvalues being greater than one (Cattell, 1966; Guttman, 1955; Kaiser, 1970). Analyses for the global scale that included all four components indicated satisfactory reliability ($\alpha = .908$) based on Nunnally's (1967) recommendation of a minimum reliability coefficient of 0.60. A total of 7 items composed the first component entitled Practicing Reading and Writing Activities. Examples of items within this component include "Practicing Letter names, individual words," "Reading signs or labels," Tracing or copying letters of words,"

and “Printing his/her name”. The second component had high loadings consisting of Parent-Child Text Reading Activities and included items such as reading “Books with poems or stories that rhyme,” “Illustrated non-fiction books”, and “Children’s magazines.” The third component had four items with high loadings labeled Beginning Print Activities with items such as “Playing with magnetic letters/letter cards,” “Playing educational games,” “Listening to story book-tapes,” and “Using children’s picture dictionary.” Lastly, the fourth component was composed of only two items but was retained due to their high loadings of .746 and .747 respectively. The last component was labeled Casual Literacy Activities and contained items “Watching educational television” and “Doing word games.” Table 8 portrays the eigenvalues for each component and Table 9 depicts the final PCA with loadings for each component

Table 8. Components and Eigenvalues for PCA

<i>Component</i>	Total Eigenvalues		
	Total	Percentage of Variance	Cumulative Percentage
1	4.900	25.790	25.790
2	3.830	20.155	45.946
3	3.034	15.967	61.912
4	1.702	8.959	70.872

Table 9. *Final PCA*

<i>Item</i>	Component 1 Practicing Reading and Writing Activities	Component 2 Parent-Child Text Reading Activities	Component 3 Beginning Print Activities	Component 4 Casual Literacy Activities
Practicing letter names, individual words	.843			
Reading signs or labels	.733			
Tracing or copying letters or words	.844			
Learning letter sounds/word parts	.762			
Printing his/her name	.735			
Reading out loud	.710			
Spelling words	.740			
Books with poems or stories that rhyme		.750		
Long "classic children's books		.690		
Chapter books		.821		
Illustrated non-fiction children's books		.802		
Short illustrated children's books		.703		
Children's magazines		.801		
Playing with magnetic letters/letter cards			.793	
Educational Games (Spill & Spell, Boggle, etc.)			.623	
Listening to storybook tapes			.806	
Using children's picture dictionary			.619	
Watching educational T.V.				.746
Doing word games				.747

In addition to the global scale, the individual components including Practicing Reading and Writing ($\alpha = .914$), Parent-Child Text Reading ($\alpha = .878$), Beginning Print Activities ($\alpha = .833$) and Casual Literacy Activities ($\alpha = .620$) all met Nunnally's (1967) recommendation of a minimum reliability coefficient of 0.60 standard respectively. Table 10 portrays the corrected item-total correlations that were adequate for all individual items ($< .40$), except reading "Illustrated non-fiction books" (.366) and "Printing his/her name" (.299). However, these items were retained because they would not considerably improve on Cronbach's alpha reliability

coefficient for internal consistency if the individual items were removed (Gliem & Gliem, 2003).

Table 10. *Item & Total-Item Correlations*

<i>Item</i>	Corrected Item- Total Item Correlation	Alpha if Item Deleted
1. Playing with magnetic letters/letter cards	.552	.904
2. Practicing letter names, individual words	.663	.902
4. Reading signs or labels	.677	.901
5. Educational Games (Spill & Spell, Boggle, etc.)	.571	.904
7. Tracing or copying letters or words	.642	.902
8. Listening to storybook tapes	.684	.900
10. Learning letter sounds/word parts	.651	.902
13. Printing his/her name	.299	.909
14. Using children's picture dictionary	.578	.903
15. Watching educational t.v. (e.g. Sesame Street)	.411	.907
19. Reading out loud	.568	.904
21. Doing word games (e.g. word find)	.565	.904
23. Books with poems or stories that rhyme	.588	.552
24. Long "classic" children's books	.588	.663
25. Chapter books	.491	.677
26. Illustrated non-fiction children's books	.366	.571
27. Short illustrated children's books	.607	.642
28. Children's magazines	.513	.684

Regression Analyses: The Influence of Home Literacy Activities on Emergent Literacy Scores

Two multiple regressions were conducted to assess the relationship between each component of the *Home Experiences Questionnaire* (Evans et al., 2001) for the present sample with phonological awareness scores and early literacy scores respectively. Descriptive statistics for the PALS-K scores indicate that all scores were normally distributed with skewness and kurtosis values within an acceptable range (see Table 11). Early literacy and phonological awareness scores were significantly correlated ($r(62) = .514, p < .05$) indicating that students who scored higher on one measure also scored higher on the other.

Table 11. Descriptive Statistics for Scores Measured by the PALS-K

Item	n	Mean	Std. Deviation	Minimum	Maximum	Skewness	Kurtosis
Phonological Awareness Scores	67	22.90	10.31	0	40	-.416	-.652
Early Literacy Scores	67	33.91	22.40	0	81	.190	-1.119

Factor scores from the PCA were transformed to regression scores using SPSS, which takes into account correlations between factors and observed values by using weighted regression coefficients and are more likely to represent “true factor” scores (DiStefano, Zhu, & Mindrila, 2009). Factor scores have a mean that is equal to zero and variance equal to the squared multiple correlation between items and the factor. Additionally, all scores on the PALS-K measuring phonological awareness and early literacy skills were standardized to allow for comparison.

Findings from the parallel multiple regressions indicated that the model is not a good fit for predicting early literacy skills scores and phonological awareness scores. There was a small correlation ($r=.10$) between Parent-Child Text Reading Activities ($r(67)=.120, p=.332$), Beginning Print Activities ($r(67)=.162, p=.189$) and children’s early literacy scores (as measured by the *PALS-K*), whereas Practicing Reading and Writing ($r(67)=.066, p=.598$) and Casual Literacy Activities were not correlated ($r(67)=.043, p=.728$). There was a slight correlation between Parent-Child Text Reading Activities ($r(67)=-.124, p=.316$) and Casual Literacy Activities ($r(67)=.197, p=.110$) with phonological awareness scores, but not with Practicing Reading and Writing ($r(67)=.008, p=.947$) and Beginning Print Activities ($r(67)=.009, p=.941$). Table 12 depicts the macro-level results for the model predicting phonological

awareness scores and Table 13 portrays the macro-level results for the model predicting early literacy scores.

Table 12. *Macro-Level Analysis of the Four Home Literacy Activities Predicting Phonological Awareness Scores*

Model	Sum of Squares	df	Mean Square	R^2	Adjusted R^2	F-Value	Prob >F
1	400.264	4	100.066	.057	-.004	.937	.448
Error	6618.005	62	106.742				
Total	7018.269	66					

Table 13. *Macro-Level Analysis of the Four Home Literacy Activities Predicting Early Literacy Scores*

Model	Sum of Squares	df	Mean Square	R^2	Adjusted R^2	F-Value	Prob >F
1	1523.290	4	380.822	.046	-.016	.747	.564
Error	31606.173	62	509.777				
Total	33129.463	66					

The *F*-test indicates the covariance amongst variables within the model was not significantly greater than chance relative to the variance within variables for each literacy outcome (Harlow, 2005). Additionally, Practicing Reading and Writing Activities, Parent-Child Text Reading Activities, Beginning Print Activities, and Casual Literacy Activities predicted 5.6% of the variance of phonological awareness scores and 4.5% of the variance of the early literacy scores. Table 14 portrays the contribution of variance for each predictor and beta weights that portray the relationship with each predictor and outcome.

Table 14. *Micro-level Summary of Early Literacy Scores and Phonologic Awareness Scores*

Dependent	Predictor	R^2	$p <$	β
Early Literacy Scores	Involved in Components	.046	.564 ^a	
	Practicing Reading and Writing Activities	.003		.037
	Parent-Child Text Reading Activities	.015		.152
	Beginning Print Activities	.026		.133
	Casual Literacy Activities	.001		.067
Phonologic Awareness Scores	Involved in Components	.057	.448 ^a	
	Practicing Reading and Writing Activities	.000		.055
	Parent-Child Text Reading Activities	.000		.121
	Beginning Print Activities	.017		.162
	Casual Literacy Activities	.041		.035
^a =Not Significant				

Due to the lack of significant findings, other factors that measure basic demographic information and past educational experiences may provide a more comprehensive understanding of children's early literacy and phonological awareness scores. Thus, a model that includes other factors that are pertinent to reading acquisition is needed.

Covariate Analysis

The literature supports a more ecological perspective when trying to understand the role of the home literacy environment and its influence on emergent literacy scores. For the present study, key demographic and developmental information was gathered in order learn about the influence these indicators may have on literacy outcomes for the current population. Hierarchical linear regression was used to determine if any of the demographic variables predicted the relationship between child's emergent literacy scores in addition to the four components previously identified.

The possible role and relationship specific variables may have with literacy skills require further analysis, and includes the following variables: attended an early education setting prior to kindergarten, number of siblings, household composition, parent educational level, parental reading abilities, family income, number of days in a week the child is read to, length of time the child is read to, age the child was first read to, the number of children and adult books within the home, language used in the home, and the language of the books child looks at. These variables were further divided into three separate categories that include Child Characteristics, Parent Characteristics, and Household Characteristics (see Table 15).

First, correlations between each early literacy scores and phonological awareness scores and variables within the Child Characteristics, Parent Characteristics and Household Characteristics were analyzed. Significant correlations were further explored using group difference statistics. All variables that were significantly correlated with phonological awareness and early literacy scores were entered in the hierarchical regression analyses.

Table 15. *Child, Parent, and Household Variables*

Child Characteristics	Parent Characteristics	Household Characteristics
Attended Early Education Setting Prior to Kindergarten	Mother's Highest Level of Education	Number of Siblings in the Home
Number of Days the Child is Read to	Father's Level of Education	Household composition
Age the Child was First Read to	Mother's Reading Ability	Family Income
Length of Time the Child is Read to	Father's Reading Ability	Language Used in Home
		Language of the Child's Books
		Number of Children's Books in the Home
		Number of Books Adults Borrow or Buy

Child Characteristics

Pearson product-moment correlations were utilized to understand the relationship between early literacy scores and phonological awareness scores for the variables assessing whether the students attended an early education setting prior to kindergarten and the number of days the child is read to on average. All correlations meeting the minimum suggested correlation coefficient ($r = 0.10$) are reported even if they did not meet significance levels ($p < .05$). The significance of rho is strongly influenced by sample size and does not indicate how strongly the variables are related, but how much confidence one should have in their results when generalizing the results to the population (Pallant, 2007). Due to the small sample size of the present study, all correlation coefficients meeting the suggested minimum correlation coefficient were reported.

The number of days the child is read to on average in a week was not correlated with either score on the PALS-K. Pearson product-moment correlations indicated a positive relationship between students who attended an early education setting prior to kindergarten and early literacy scores ($r(67) = 0.283, p > .05$), indicating

higher scores of early literacy, as measured by the PALS-K, are associated with children who attended an early education setting. An independent-samples t-test was conducted to compare early literacy scores for student who did and did not attend an early education setting prior to kindergarten. Levene's test for Equality of Variance was larger than .05 indicating equal variance of scores for the two groups. There was a significant difference ($t(65) = -2.382, p < .05$) in scores for those who did not attend an early education setting ($M = 27.52, SD = 19.206$) and those who have ($M = 40.12, SD = 23.78$). The magnitude of the difference in means ($M_{difference} = -12.602, 95\% CI [-23.17, -2.04]$) was moderate to large ($\mu^2 = .08$) with a medium effect size ($d = 0.59$) (Cohen, 1998; Pallant, 2007). Note that effect size estimates are based on Cohen's (1992) recommendations of small ($d = 0.20$), medium ($d = 0.50$), and large ($d = 0.80$). These findings demonstrate that children who attended an early educational setting prior to kindergarten had significantly higher early literacy scores than those students who had not.

Parents were asked to identify the age they began reading to their child and the average length of time they read to their child. Parents' endorsements of the age they began reading to their child varied, with approximately 61% ($n = 44$) reporting they began reading to their child after one year of age. Additionally, 54% ($n = 41$) identified that an adult reads to the child for approximately 10-20 minutes on a typical day. Table 16 summarizes the frequency of parents' endorsements for both variables.

Table 16. *Frequency of the Age the Student Was First Read To and Average Time Spent Engaged in Adult-Child Reading*

<i>Category</i>	<i>N</i>	<i>Percent</i>
Age The Student Was First Read To		
Under 2 Months	11	15.3
2-6 Months	8	11.1
7-11 Months	9	12.5
12-24 Months	20	27.8
2-3 Years	19	26.4
4 Years	2	2.8
Not Yet	3	4.2
Average Time Spent Engaged in Adult-Child Reading		
Up to 10 Minutes	7	9.3
10-20 Minutes	41	54.7
20-30 Minutes	20	26.7
30-40 Minutes	5	6.7
40-50 Minutes	1	1.3
Over an Hour	1	1.3

Correlations were conducted utilizing Spearman rho coefficient for variables measuring the age the student was first read to and average time spent engaged in adult-child reading activities with students' early literacy scores and phonological awareness scores (as measured by the PALS-K). Spearman's rho (ρ_s) is an appropriate measure of correlation with ordinal measures and non-linear relationships (Caruso & Cliff, 1997). The average time the child spends engaged in reading activities was not correlated with phonological awareness or early literacy scores, however parents' endorsements of the age the first child was read to was significantly correlated with both scores. Parents reports of the age their child was first read to was negatively correlated with phonological awareness scores ($\rho_s(64) = -0.385, p < .05$) and early literacy scores ($\rho_s(63) = -0.248, p < .05$), indicating that the earlier parents reported reading to their children, the higher the students' scores were for phonological awareness and early literacy as measured by the PALS-K. To further investigate

group differences, separate one-way between-groups analysis of variance (ANOVAs) were conducted. Results from the ANOVAs revealed there were statistically significant differences between the age groups that the students were first read to and scores of phonological awareness ($F(6,57)=2.76, p<.05$) but not with scores of early literacy ($F(6,57)=0.96, p=.460$).

Parent Characteristics

Due to the nature of the variables, Spearman's rho correlations were utilized to understand the relationship between mothers' educational highest level and reading ability, and fathers' highest educational level and reading ability with their child's phonological awareness and early literacy scores. Parents were asked to indicate their highest level of education from seven categories (did not complete elementary school, elementary school, high school grade 10, high school grade 12 or 13, community college, undergraduate university, and post graduate school), and their reading abilities (very below average, below average, about average, above average). Approximately half of mothers and fathers who responded had reached 12th grade. More than 80% of mothers ($n=60$) and 78% of fathers ($n=49$) reported having average to above average reading abilities (see Table 17). The results of the correlational analysis revealed mother's educational level was significantly correlated with their child's early literacy scores ($\rho_s(64)=.257, p<.05$). Mother's reading abilities ($\rho_s(65)=.154, p=.220$), and father's highest educational level ($\rho_s(59)=.180, p=.172$) were slightly correlated with early literacy scores, however did not reach significance, whereas father's reading abilities were not correlated with either score.

Table 17. *Mother and Fathers' Reading Abilities*

<i>Category</i>	<i>n</i>	<i>Percent</i>
Mother's Reading Ability		
Very Below Average	3	4.1
Below Average	10	13.7
About Average	41	56.2
Above Average	19	26.0
Father's Reading Ability		
Very Below Average	6	9.5
Below Average	8	12.7
About Average	28	44.4
Above Average	21	33.3

To further explore the role of mother's highest educational level with early literacy scores, a one-way between subjects ANOVA was conducted with educational level and early literacy skills (as measured by the PALS-K). Mother's Educational Level scores were normally distributed and met assumptions of homogeneity of variance via Levene's test ($F(4,58)=.309, p=.871$). Results shown in Figure 2 demonstrate a statistically significant difference at the $p<.05$ level between mother's educational level and children's score of early literacy scores as measured by the PALS-K ($F(5,58)=2.71, p<.05$). Despite reaching statistical significance, the actual mean difference in mean scores between the groups was quite small. The effect size, calculated using eta squared, was .17. Eta squared is a measure of effect size for an ANOVA easily calculated using SPSS with .02 representing a small effect, .13 equivalent to a medium effect and .26 indicative of a large effect size (Cohen, 1988). Post-hoc analyses were conducted with groups that reported their highest educational level as elementary school, high school grade 10, high school grade 12 or 13, and community college. Those reporting their highest level of education as not completing elementary school ($n=1$) and attending undergraduate university ($n=2$) were not

included due their low response rates. Post-hoc comparisons using the Tukey HSD test indicated that the mean score of student's early literacy scores measured by the PALS-K differed for mothers who endorsed attending community college ($M=53.3$, $SD= 24.824$) and was significantly different from those whose highest level of education was high school grade 12 or 13 ($M=29.60$, $SD= 21.264$) and high school grade 10 ($M=27.14$ $SD= 17.973$). These findings indicate that students whose mothers attended college had significantly higher early literacy scores as measured by the PALS-K than those who had not attended any post-secondary school.

Figure 2. *PALS-K Early Literacy Scores by Mother's Highest Level of Education*

Household Characteristics

Lastly household characteristics were analyzed to further understand their relationship with phonological awareness and early literacy scores. The frequencies for household composition, number of siblings, annual income, number of child books and adult books in the home, language spoken in the home and language the child was read to are presented in Table 18.

Table 18. *Summary of Frequencies for Household Composition, Annual Income, Language Spoken in the Home, and Language the Child Listens to Books*

Category	n	Percent
Household Composition		
Single-Parent Household	30	40.5
Two-Parent Household	44	59.5
Number of Siblings		
0	9	12.2
1	18	24.3
2	29	39.2
3	9	11.8
4	5	6.6
5	1	1.3
6	3	3.9
Annual Income		
Under \$16,000	35	47.9
Between \$16,000-\$26,000	18	24.7
Between \$26,000-\$40,000	14	19.2
Between \$40,000-\$55,000	6	8.2
Number of Children's Books in Home		
1-10	18	24.0
10-20	14	18.7
20-35	19	25.3
35-75	15	20.0
75-150	9	12.0
Adult books bought or borrowed in 6 months		
0	6	8.2
1-2	22	30.1
About 5	19	26.0
About 10	18	24.7
About 15-20	8	11.0
Language Spoken in the Home		
English	19	25.3
Spanish	24	32.0
English and Spanish	24	32.0
Portuguese and English	1	1.3
Creole	3	4.0
Creole and English	3	4.0
More than Two Languages	1	1.3
Language the Child Listens to Books		
English	41	54.7
Spanish	10	13.3
English and Spanish	22	29.3
Portuguese and English	2	2.7

The relationship between number of siblings with measures of phonologic awareness and early literacy skills were analyzed using Pearson's correlation coefficient. Results of the analyses resulted in no significant correlations between the numbers of siblings residing in the home with either score as measured by the *PALS-K*.

The relationship between household annual income and students' scores of early literacy and phonological awareness was investigated using Spearman's rho correlation coefficient. Annual income was moderately correlated with students' phonological awareness ($\rho_s(59)=0.373, p < .05$) and early literacy scores ($\rho_s(63)=0.314, p < .05$) as measured by the *PALS-K*. These findings suggest that as parents' income increases, students' scores on the *PALS-K* for both indices increase. To further investigate the difference of each income designation on children's scores as measured by the *PALS-K*, two separate one-way between-groups ANOVAs were conducted for early literacy and phonological awareness scores for kindergarten students. Results indicated that there was not a significant difference between groups at the specified $p < .05$ based on household annual income for early literacy scores ($F=2.452, p=.072$). As shown in Table 19, there was a significant difference between the four income levels and children's phonological scores ($F=4.105, p < .05$). Levene's test for homogeneity of variance revealed the variance in scores are the same for each income level ($F(3, 60)=0.246$). Eta-squared was calculated by dividing the sum of squares between groups by the total sum of squares indicating a moderate to large effect ($\eta^2 = 0.17$). Post-hoc comparisons using the Tukey HSD test indicated

there were no significant mean differences between each group at the $p = .05$ level.

Figure 3 depicts the means of phonological awareness scores by income.

Table 19. *Group Differences Between Income and Phonological Awareness Scores*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1175.570	3	391.857	4.105	.010
Within Groups	5727.867	60	95.464		
Total	6903.438	63			

Figure 3. *Phonological Awareness Scores by Annual Household Income*

Household composition was collapsed into two groups, single-parent and two-parent households. Household composition was not significantly correlated with phonological awareness scores ($\rho_s(65)=0.233, p=.062$) or early literacy scores ($\rho_s(65)=0.006, p=.963$). These results indicate that neither phonological scores nor early literacy scores are influenced whether there are two parents or a single parent present.

The number of child books within the home have been shown in a multitude of studies to be representative of resources available for children to engage in reading activities (Mol & Bus, 2011), however our results did not support this finding. The number of child books within the home was not significantly correlated with scores of phonological awareness ($\rho_s(67)=0.152, p=.220$) nor early literacy scores ($\rho_s(67)=0.215, p=.08$). The number of books adults within the home bought or borrowed within a six month time period was not significantly correlated with phonological awareness scores ($\rho_s(60)=-0.025, p=.842$), however was correlated with early literacy scores ($\rho_s(65)=0.265, p<.05$). These findings indicate a relationship between higher scores of early literacy with more adult books bought or borrowed within a 6 month time period. To understand if students' scores of early literacy as measured by the *PALS-K* differed by the number of adult books that were bought or borrowed, a one-way ANOVA was conducted. Results from the ANOVA revealed no significant differences between children's early literacy scores based on how many adults books were available within the home ($F(4,60)=1.560, p=.197$).

Languages spoken in the home and the language used when reading books to children were analyzed using two independent ANOVAs to learn if there were group differences amongst scores for early literacy and phonological awareness. Correlations were not conducted due to the nominal nature of the variables. Means and standard deviations for each group are presented in Table 19 and Table 20. Scores for students who spoke Portuguese and English, and more than two languages, were not included in the analyses because each group was composed of only one student. Both predictor variables met assumptions for one-way analysis of variance including

homogeneity of variance by means of a non-significant Levene's test ($p > .05$). Results from the two independent ANOVAs resulted in no significant differences between groups whose language spoken in the home differed on measures of phonological awareness ($F(4,54)=.609, p=.658$) and early literacy scores ($F(4,58)=.427, p=.788$). Additionally, scores of phonological awareness ($F(3,57)=1.036, p=.383$) and early literacy ($F(3,61)=.138, p=.937$) as measured by the PALS-K did not differ based on the language used when reading books to children. These results signify that despite the language that is used within the home environment and the language used when reading books to children, children's scores on the PALS-K (measured in English) did not differ.

Table 20. *Mean Phonological Awareness Scores by Language Spoken in the Home and Language the Child Listens to Books In*

Language Spoken in the Home	Mean	Std. Deviation
English	26.47	9.23
Spanish	20.10	11.09
English and Spanish	22.86	11.03
Creole	21.33	4.619
Creole and English	20.00	14.00
Language the Child Listens to Books		
English	24.29	10.36
Spanish	17.43	11.47
English and Spanish	21.45	9.88
Portuguese and English	32.00	5.66

Table 21. *Mean Early Literacy Scores by Language Spoke in the Home and Language the Child Listens to Books In*

Language Spoken in the Home	Mean	Std. Deviation
English	37.24	23.41
Spanish	28.55	19.43
English and Spanish	35.57	25.02
Creole	35.67	22.50
Creole and English	19.33	22.38
<hr/>		
Language the Child Listens to Books		
English	33.17	23.00
Spanish	38.43	19.29
English and Spanish	32.77	24.45
Portuguese and English	39.00	4.24

Lastly, to ensure that languages used in the home and language used when reading books to children did not significantly contribute to both literacy scores, each component was dummy-coded to allow for standard regression analysis. Neither the language spoken in the home, nor language the child listen to books in significantly explained the variance in early literacy and phonological awareness scores. Therefore, these variables were not entered as predictors in the hierarchical regression model.

Hierarchical Regression Analyses

To further understand the contribution of child, parent and household variables, two separate hierarchical regression analyses were conducted for phonological awareness and early literacy scores (as measured by the PALS-K). Hierarchical multiple regression allows assessment of whether a set of variables adds to the prediction of an outcome variable over and above the variables already in the model (Harlow, 2005). The use of hierarchical regression will aid in the understanding of demographic variables (nested data), in addition to the home literacy activities (as measured by the *Home Experiences Questionnaire*). All demographic

variables that were significantly correlated with each literacy outcome were entered in separate stages. Child variables were entered in Step 1, Parent variables were entered in Step 2, Household variables were entered in Step 3, and regression coefficients from the previous standard regression of the HLE were entered in the last Step of the analyses.

To learn which model best explains the variance of early literacy scores, Child Characteristics were entered in Step 1. The variables included the age the child was first read to and whether the child attended an early education setting. In Step 2, Parent Characteristics were entered into the model, which included mother's highest educational level. Income and the number of adult books borrowed or bought within a 6 month time period were entered in Step 3 of the regression analysis. Lastly, the four regression coefficients representing the HLE components (Practicing Reading and Writing Activities, Parent-Child Text Reading Activities, Beginning Print Activities, and Casual Literacy Activities) were entered.

As seen in Table 22, the full model explains approximately 31% of the variance in early literacy scores and represents a medium to large effect size ($R^2=0.310$). Note that effect size estimates are based on Cohen's (1992) recommendations of small ($R^2=0.02$), medium ($R^2=0.13$), and large ($R^2=0.32$). The adjusted R^2 allows us to better generalize to a population and is largely impacted by sample size. The goal of the present study was to best understand the factors that contribute a low-income community, thus an adjusted R^2 would not be an appropriate representation of model's variance. All Child variables explained 13% of the variance of early literacy scores ($F(2,56)=4.198, p<.05$) whereas Parent variables explained an

additional 3.8% of the variance ($F(3,55)=3.691$, $p<.05$). Income and the number of adult books within the home accounted for 8.9% of variance ($F(5,53)=3.675$, $p<.01$) above and beyond Child and Parent characteristics. The HLE components explained an additional 5.3% of scores ($F(9,49)=2.447$, $p<.05$). Income was the only variable that made a statistically significant contribution to the final model ($t=2.379$, $p<.05$, $\beta=0.361$).

Table 22. *Macro-level Analysis of Each Step in the Model for Early Literacy Scores*

Model	R ²	Adjusted R ²	Standard Error of the Estimate
1	.130	.099	.95262899
2	.168	.122	.94046294
3	.257	.187	.90484049
4	.310	.183	.90709859

As seen in Tables 23 and 24, the full model that includes the HLE components, in addition to Child, Parent, and Household characteristics, significantly predicts early literacy scores at the $p=.05$ level. While each step entered significantly predicted early literacy scores at the $p=.05$ level, the final model explains considerably more variance than the previous models. Thus a model that incorporates the HLE and demographic variables provides a more ecological perspective that may best explain early literacy scores for the present population rather than demographic variables or the home literacy environment components alone. Table 24 provides a micro-level analysis of the current model.

Table 23. *Macro-Level Analysis of Regression Model for Early Literacy Scores*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.619	2	3.809	4.198	.020
	Residual	50.820	56	.908		
	Total	58.439	58			
2	Regression	9.793	3	3.264	3.691	.017
	Residual	48.646	55	.884		
	Total	58.439	58			
3	Regression	15.046	5	3.009	3.675	.006
	Residual	43.393	53	.819		
	Total	58.439	58			
4	Regression	18.121	9	2.013	2.447	.022
	Residual	40.319	49	.823		
	Total	58.439	58			

Table 24. *Hierarchical Linear Regression Model for Early Literacy Scores*

Variables	Step 1			Step 2			Step 3			Step 4		
	<i>b</i>	SE	β	<i>b</i>	SE	β	<i>b</i>	SE	β	<i>b</i>	SE	β
Attended Early Education Setting	-.385	.257	-.193	-.286	.261	-.144	-.378	.264	-.189	-.371	.270	-.186
Age first Read to	-.158	.078	-.259	-.135	.079	-.223	-.055	.083	-.091	-.021	.086	-.034
Mother's Highest Level of Education				.189	.121	.205	.113	.122	.122	.131	.137	.142
Income							.285	.138	.290*	.354	.149	.361*
Adult Books							.125	.106	.144	.037	.127	.042
Practicing Reading and Writing Activities										.003	.120	.003
Parent-Child Text Reading Activities										.191	.157	.180
Beginning Print Activities										.178	.120	.187
Casual Literacy Activities										.020	.131	.020
* $P < .05$												

Finally, a hierarchical linear regression was used to assess how the ability of the four components of the HLE (as measured by the *Home Experiences Questionnaire*) can predict scores of phonological awareness (*PALS-K*), after controlling for Child, Parent and Household characteristics that were significantly correlated with phonological awareness scores. The age the child was first read to was entered at Step 1, explaining 14% of the variance in phonological awareness scores. Next, Household variables (income) was entered which explained 7% ($F(2,59)=7.838$, $p<.05$) variance of the total model, and indicated a small effect size ($R^2=.07$) (Cohen, 1992). Lastly, the four HLE components were entered into the model and explained an additional 3.9%, which significantly explained more variance than the demographic variables alone ($F(6,55)=3.039$, $p<.05$). These findings suggest that the HLE as measured by the *Home Experiences Questionnaire* explained a significant proportion of variance of phonological awareness scores above and beyond Child and Household characteristics. The age the child was first read books to as reported by their parent ($t=-1.955$, $p<.05$, $\beta=-0.262$) and income ($t=1.970$, $p<.05$, $\beta=-0.266$) were the only variables that made a statistically significant contribution to the final model. Table 25 provides a macro-level summary of the model and Table 26 provides a micro-level summary of the model.

Table 25. *Macro-Level Analysis of Regression in Each Step for Phonological Awareness Model*

Model		Sum of Squares	df	F	Sig	R ²	Adjusted R ²	Standard Error of the Estimate
1	Regression	8.953	1	9.744	.003	.140	.125	.95852455
	Residual	55.126	60					
	Total	64.079	61					
2	Regression	13.452	2	7.838	.001	.210	.183	.92632925
	Residual	50.627	59					
	Total	64.079	61					
3	Regression	15.955	6	3.039	.012	.249	.067	.93540219
	Residual	48.124	55					
	Total	64.079	61					

Table 26. *Micro- Level Analysis of Regression Model for Phonological Awareness Scores*

Variables	Step 1			Step 2			Step 3		
	<i>b</i>	SE	β	<i>b</i>	SE	β	<i>b</i>	SE	β
Age First Read To	-.234	.075	-.374*	-.159	.079	-.254*	-.164	.084	-.262*
Income				.292	.128	.291*	.267	.136	.266*
Practicing Reading and Writing Activities							-.069	.118	-.071
Parent-Child Text Reading Activities							.011	.121	.010
Beginning Print Activities							-.051	.120	-.053
Casual Literacy Activities							.185	.124	.177

* $p < .05$

Chapter IV: Discussion

The purpose of this research was to explore the home literacy environment and its utility as a predictor of kindergarten students' emergent literacy skills.

Specifically, the present study sought to understand how literacy activities in the home may differ for those living in a small low-income community from that of a medium-high SES population, and how these activities impact children's early literacy and phonological awareness scores. After examining the component structure of the *Home Experiences Questionnaire* (Evans et al., 2001), designed to be a broad measure of the HLE, the present study assessed the relationship between specific activities within the HLE with early literacy and phonological awareness scores as measured by the *PALS-K*. Additionally, the present study explored the relationship between demographic variables, components of the *Home Experiences Questionnaire*, and scores from the *PALS-K*.

Findings from the Home Experiences Questionnaire

A previous study conducted by Levy et al. (2006) explored the HLE for a sample of families (n=474) living in Canada with a majority of families with median-high incomes, 73% spoke English-only, and were slightly more educated than community norms. Parents' ethnicities were not measured in the previous study. It was hypothesized that the principal component structure of the survey would differ for the present sample compared to that of a middle-upper socioeconomic sample as measured by Levy et al. (2006). The results of the PCA supported this hypothesis, with the present study resulting in four components that explained approximately 71% of the variance. This contrasts findings from Levy et al.'s (2006) study that resulted in

six components that accounted for approximately 55% of the variance. These findings could be interpreted in a number of ways. Possible explanations for the inconsistent results may be due to differences in responses from parents from differing socioeconomic levels, the methodological approaches utilized to retain components, and the variable samples included in both studies.

Principal components analysis partitions the total variance by finding the linear combination of the variables, which accounts for the maximum account of variance and then finds a second uncorrelated linear combination (after controlling for the variance attributable to the first linear combination), and so on (Stevens, 1992). The components and scores may have combined to form different components based on the variance due to participants' responses. Additionally, there may be a lack of consensus in what is deemed best practices in retaining reliable components (Costello & Osborne, 2005; Stevens, 1992). Levy et al. (2006) identified the components using the retention of all of eigenvalues greater than 1.0 rule of thumb, which is the common default component retention rule used in most statistical software packages, but may be among the least accurate methods (Costello & Osborne, 2005). It is recommended to use the eigenvalues greater than 1.0 rule as a guideline, while also using the scree plot to see the natural break point in the data, and including item loadings above .30 with no or few cross-loadings (Costello & Osborne, 2005; Harlow, 2005; Stevens, 1992). Levy et al. (2006) acknowledged four items with complex cross-loadings ($>.40$), but did not identify the items, nor their logic for not dropping these components from the analysis. While including all items helps maintain the integrity

of the data, dropping items may increase the interpretability and is left to the researcher's discretion (Costello & Osborne, 2005).

Results may also differ due to communality indexes of both studies. Stevens (1992) explains that differences may occur when the number of variables are low (e.g. $< .20$) as in the present study, and when some communalities are low (e.g. $< .40$) as in Levy et al.'s (2006) study. It should be noted that Levy et al. (2006) did not report their eigenvalues and loadings for each item, resulting in difficult comparisons for micro-level analyses. Additionally, Levy et al. (2006) reported group means and standard deviations for each variable, but due to violations in the assumption of equal variances across groups and the large differences in sample size, independent t-tests were not conducted to learn if there were group differences. Future analyses should be conducted with the *Home Experiences Questionnaire* (Evans et al., 2001) for families from low, middle and high SES contexts to learn if there are significant group differences.

The present study identified four uncorrelated linear combinations that included Practicing Reading and Writing Activities, Parent-Child Text Reading Activities, Beginning Print Activities, and Casual Literacy Activities. The Practicing Reading and Writing Component in the present study was composed of similar variables as measured by Levy et al. (2006) including, spelling words, reading out loud, practicing letter names/individual words, reading signs and labels, printing his/her name and learning letter sounds/word parts. Doing word games fell within the Practicing Reading and Writing component for Levy et al.'s (2006) study, whereas in the present study it helped comprise the Casual Literacy Activities. The Beginning

Print Activities were similar to Levy et al.'s (2006) findings including variables examining using children's picture dictionary, playing with magnetic letters/letter cards, and listening to storybook tapes. Playing educational games (e.g. Spill & Spell, Boggle) was included in the Beginning Print Activities component within the present study, however was categorized as Reading Child Advanced Text in Levy et al.'s (2006) study. Additionally, Levy et al. (2006) established four separate components consisting of Phonics/Phonological Awareness Activities, Casual Activities with Books/Print, Traditional Shared Book Reading, and Reading Child Advanced Text. These components were collapsed into one category representing Parent-Child Text Reading Activities for the present study, and consisted of similar variables including reading books with poems/stories that rhyme, long classic children's books, chapter books, short illustrated children's books, and children's magazines. Lastly, Casual Literacy Activities in the present study was composed of watching educational television, which was not included in Levy et al.'s (2006) final analysis, and doing word games, which the author's categorized as Practicing Reading and Writing. Table 27 presents a visual representation of the differing components for the PCA for both studies.

Table 27. *Comparison Analysis of the Component Structures from Both Studies*

Present Study's Components				
Levy et al.'s (2006) Components	I. Practicing Reading and Writing	II. Beginning Print Activities	III. Parent-Child Text Reading Activities	VI. Casual Literacy Activities
I. Practicing Reading and Writing	Spelling Words			Doing Word Games
	Reading Out Loud			
	Practicing Letter Names/Individual Words			
	Reading Signs and Labels			
	Printing his/her Name			
	Learning Letter Sounds/Word Parts			
II. Beginning Print/ Book Activities		Using Children's Picture Dictionary		
		Playing with Magnetic Letters/Letter Cards		
		Listening to Storybook Tapes		
III. Phonics/ Phonological Awareness Activities			Read Books with Poems or Rhyme to Child	
IV. Casual Activities with Books/Print			Read Children's Magazines to Child	
V. Reading Child Advanced Text		Playing Education Games	Read Long "Classic" Books to Child	
VI. Traditional Shared Book Reading			Read Chapter Books to Child	
			Read Illustrated non-fiction Books to Child	
			Read Short Illustrated Storybooks to Child	
				Watching Educational T.V.*

Note. Ratings for involvement were as follows: 1, never; 2, rarely (1-3 per month); 3, from time to time (7-15 times during past 4 months or 2-3 times per month); 4, often (20-30 times during past 4 months or 1-2 per week); 5, frequent (40-60 times during past 4 months or 3-4 times per week); 6, nearly every day (>80 times during past 4 months)

* Was not included in Levy et al.'s Final Component Structure

Our study's findings may also differ from that of Levy et al.'s (2006) because the majority of the students (97%) ages 48 to 83 months were in an early educational setting, compared to 50% of students in the present study. Moreover, children's experience in previous educational settings was not measured in the previous study, but was included in the current study. The authors explained the structure of schooling for the participants living in Canada in their study. Four-year-olds in junior kindergarten received lessons focused on oral language and learning letter names. They are expected to have the ability to recognize their written names by the end of the year. The 5-year-olds in senior kindergarten were taught to print letters and their own names while focusing on oral language skills, letter knowledge and phonemic awareness. Additionally, the 6-year-olds who were in first grade should be able to read familiar words and write simple words from the alphabet (Levy et al., 2006). Moreover, the PCA for their study was conducted with 4, 5, and 6 year olds, which may have resulted in different components.

In the present study, only half of students attended an early educational setting. A recent report from the National Institute for Early Education Research (2008) asserts that multiple meta-analyses have found preschool education to produce an average immediate effect equivalent to half a standard deviation on cognitive development, which is enough to reduce the school readiness gap between children living in poverty and the national average by half (Barnett, 2008). Furthermore, the report finds that children from socioeconomically disadvantaged backgrounds may benefit by attending early educational settings (e.g. day care, Head Start, pre-kindergarten) earlier and for a longer duration than their middle to higher income

counterpart (Barnett, 2008). Understanding previous formal educational opportunities and the utilization of these programs may be important facets to assess when trying to differentiate between the home literacy environment and previous educational opportunities with children's emergent literacy scores. Additionally, all educational settings are not created equal and assessment of the types of programs students have previously been involved in may explain a greater degree of the variance in the emergent literacy skills.

Relationship Between the Home Literacy Environment and Emergent Literacy Scores

To explore the relationships between the components of the *Home Literacy Experiences Questionnaire* (Evans et al., 2001) and the emergent literacy scores (phonological awareness and early literacy skills) as measured by the *PALS-K*, standard regression analyses were conducted to learn how each component explained the variance in emergent literacy scores. Moreover, it was hypothesized that students' engagement in formal literacy activities would be more highly correlated with early literacy skills and informal activities would be more highly correlated with phonological awareness.

Practicing Reading and Writing Activities and Beginning Print Activities formed categories involving formal literacy activities, whereas Parent-Child Text Reading Activities and Casual Literacy Activities included interactions that were informal in nature. The results of the analyses provided little support for the proposed hypothesis. Practicing Reading and Writing Activities, Parent-Child Text Reading Activities, Beginning Print Activities, and Casual Literacy Activities conducted by parents with their children in the home did not significantly explain the variance of

early literacy scores, nor phonological awareness scores. While home literacy activities were slightly correlated with early literacy scores, they did not significantly explain the relationship between these variables. These findings may be due to a variety of reasons.

Children from lower socioeconomic backgrounds tend to score lower on measures of early reading upon entry to formal schooling compared to children from affluent SES homes (Hecht et al., 2000). Past research has demonstrated a strong relationship between socioeconomic status and early literacy scores (Bradley & Corwyn, 2002; Hecht et al., 2000; Lundberg, Larsman, & Strid, 2012). The home literacy environment examines many forms of literacy activities and factors including family income, parental education, educational resources, and parental involvement (Bhattacharya, 2010). Cunningham (2006) asserts, “Poverty is the largest correlate of reading achievement” (p.382). However, causal models relative to SES do not effectively portray the relationships with outcome measures because of the reciprocal relationship that exists between individuals and their environments (Bradley & Corwyn, 2002). Other factors that are not inclusive in the HLE have varying impacts on children’s literacy skills and abilities and may be indicative of biological and environmental factors. The effects of poverty may differentially affect students’ early literacy skills and may be mediated and/or moderated by other factors (Noble, Farah, & McCandliss, 2006).

Multifactorial Associations with Emergent Literacy Scores

In order to encompass a broader understanding of the HLE measures, child, parental and household characteristics were included in addition to literacy activities

conducted within the home. This was done to determine if a combination of these factors explained a greater percentage of the variance in phonological awareness and early literacy scores. Noble and colleagues (2006) argue for a multifactorial association between SES and reading ability due to its contribution to individual differences in literacy skills. Factors that have been identified as influential in children's reading acquisition include parental educational level and their reading abilities, household income, primary language used in the home, early educational experiences, the amount of time parents spend engaged in reading activities with their children, and additional environmental and contextual factors (August et al., 2006; Barnett, 2006; Bhattacharya, 2010; Bradley & Corwyn, 2002; Curenton & Justine, 2008; Dickinson & Snow, 1987; Farver et al., 2013; Foster et al., 2005; Lundberg et al., 2012; Senechal & LeFevre, 2002; Umek et al., 2005). These factors may play differentiating roles in phonological awareness and early literacy scores (as measured by the *PALS-K*) and may provide a more thorough understanding of the many influences, including the HLE, impacting students' emergent literacy skills.

It was hypothesized that demographic variables would provide a more comprehensive understanding of the relationship between the components of the *Home Literacy Experiences Questionnaire* (Evans et al., 2001) and early literacy scores as measured by the *PALS-K*. Bivariate correlations were conducted with child-focused variables (past formal educational experience, the average number of days and time spent engaged in reading activities, and the age he/she was when they were first read to), parent-centered variables (mother and fathers' highest level of education and self-reported reading abilities), and household characteristics (single vs. two parent

households, annual family income, number of siblings in the home, languages used within the home, and the language that the child listens to books). All significant correlations between child, parental, and household variables and phonological awareness and early literacy scores were analyzed in the final model. The findings suggest that individual, parental, and household factors may play a differential role in phonological awareness and early literacy scores. Table 28 depicts these findings.

Table 28. *Demographic Variables Correlated with Emergent Literacy Scores*

	Phonological Awareness Scores	Early Literacy Scores
Child Factors	Age the Child Was First Read To	Attended Early Education Setting Age the Child Was First Read To
Parent Factors		Mother's Highest Level of Education
Household Factors	Income	Income Number of Books Parents have Bought or Borrowed in Past 6 Months

After controlling for child-focused variables (e.g. formal early educational experience and the age the child was first read to), parental variables (e.g. mother's highest level of education) and household variables (e.g. annual household income and the number of adult books within the home), the home literacy environment explained an additional 5.3% of the variance in early literacy scores as measured by the *PALS-K*. The entire model including all HLE and demographic variables explained 31% of early literacy scores. Annual household income was the largest predictor of scores. Additionally, the home literacy environment significantly contributed 3.9% of the variance of phonological awareness scores as measured by the *PALS-K* after controlling for child-centered variables (e.g. age the child was first read to) and household variables (e.g. annual income). Child and household variables alone explained approximately 21% of the variance of phonological awareness scores. These

findings suggest that demographic variables may provide a more comprehensive understanding of phonological awareness scores and early literacy scores compared to literacy activities conducted within the home environment. Moreover, the combination of demographic variables and home literacy environment characteristics may play an additional role in the explanation of early literacy and scores for the present population.

Child Factors

Child variables, including the self-reported age the parent began reading to his or her child, was correlated with both early literacy and phonological awareness scores, whereas attendance at an early education center was highly correlated with only early literacy scores. The frequency of child-parent reading was not related to phonological awareness or early literacy scores. This is consistent with Leyva, Sparks and Reese's (2012) conclusions that showed mother's book-reading was not related to phonological awareness scores for students in preschool from low-income ethnically diverse families. However, a number of other studies have shown that book reading is an important factor in children's emergent literacy acquisition (Bus et al., 1995; DeBaryshe & Binder, 1994; Wood, 2002). Future research is needed to clarify parent-child book reading activities' role with different populations.

First, the age the child was first read text by a parent may provide insight into differing factors such as parents' belief of the importance of reading to their child, their abilities, or the time they have available to read. Additionally, children may learn more new vocabulary during reading than during parent-child conversations (Mol & Bus, 2011). Books contain three times as many low-frequency words than

conventional conversations with parents and their children (Hayes & Ahrens, 1988; Mol & Bus, 2011). Additionally, children learn from a variety of activities that involve text, such as the T.V. guide, parents' notes, and video games, and should be included in measuring children's interactions with text (Purcell-Gates, 1996). Hart & Risley (1995) found that a child from a lower socioeconomic status home is more likely to be exposed to fewer words and less complex vocabulary. Thus, book reading and other activities involving text at an early age may contribute to children's vocabulary and phonological awareness skills.

Second, early educational centers (e.g. daycare) have been shown to provide positive effects on children's early literacy acquisition (Magnuson, Meyers, Ruhm, & Waldfogel, 2004), but vary in terms of quality and their impact on child's cognitive development (Barnett, 2008). The early literacy skills composite, as measured by the *PALS-K*, consists of tasks that measure alphabet knowledge, letter sounds, spelling, concept of a word and word recognition in isolation. As stated earlier, students' attendance at an early education center was correlated with higher scores of early literacy. Based on previous research, daycare appears to provide the smallest of positive effects however differs based on quality standards. Head Start tends to have small cognitive effects with larger effects for specific literacy skills that are more easily taught (Barnett, 2008). Additionally, state and local pre-kindergarten with high standards have been shown to be the most promising for all children, including those from low socioeconomic backgrounds (Barnett, 2008; Gormley, Gayer, Phillips, & Dawson, 2005). Understanding the daily activities, curriculum, and interactions

children have with print in these settings may provide a more thorough understanding of early education's role on the development on differing literacy skills.

Lastly, phonological awareness skills represent the ability to recognize the variety of sound units in words. One of the most basic skills associated with phonological awareness is phoneme awareness, which represents the ability to recognize individual speech sounds in spoken words (Ehri, 2004). Low achieving and at risk students may have more difficulty manipulating phonemes and developing awareness of the phonemic structure of language (Pratt & Brady, 1988). Phonemic awareness can easily be incorporated in the classroom with proper teacher training and instruction. Acquiring awareness of phonemes in spoken words is not a natural process and usually needs to be taught (Ehri, 2004). High quality instruction is imperative in improving children's reading abilities and curriculum should be taught in systematic, explicit and structured ways (Moats, 2010). Teachers in early education settings may not be properly trained to best teach students these skills or reflect differential epistemologies on how students learn to read. A recent article in *The Washington Post* explains, "Fresh out of high school, our future teachers are hugely dependent on their college education to prepare them to teach children to read. Teachers can hardly be expected to teach what they haven't been taught, much less that which they have been trained to reject" (Strauss, 2013). Additionally, those who work in early educational settings may not have experience or training in teaching skills associated with phonological awareness or phoneme awareness. For example, O'Leary, Cockburn, Powell, & Diamond (2010) found that Head Start teachers were uncertain about evidence-based practices in teaching letter-sound associations, in

particular to children with limited English proficiency. These findings provide insight into the weak relationship between prior early educational settings and phonological scores within the present study.

Parent Factors

Of the parental characteristics, mother's highest level of education was related to early literacy skills, whereas father's highest level of education, and both parents' self-reported reading abilities were not related to early literacy or phonological awareness scores. This may be due to a variety of reasons. In the present study, approximately 39% of children lived in single-mother households, which is larger than the national average of 24% (The Federal Interagency Forum on Child and Family Statistics, 2013). Due to the larger number of single-parent households and the small sample size, mother's self-reported educational level may be more represented than father's highest level of education. Moreover, numerous studies have found that maternal education, maternal beliefs about the importance of reading, and maternal verbal abilities are associated with increased book reading (DeBaryshe, 1995, Raikes et al., 2006; Scarborough & Dobrich, 1994). The impact of these factors may differentially impact children's literacy skill acquisition due to the child's age, abilities, and educational experiences (Raikes et al., 2006).

Few studies have examined the role of fathers' contributions to their child's literacy skill development for a socioeconomic disadvantaged sample (Pancsofar & Vernon-Feagans, 2010). Duursma, Pan, & Raikes (2008) discovered that fathers' level of education influenced reading behaviors and fathers who received a high school diploma were more likely to read to their children, which in turn, predicted

children's language outcomes. Pancosfar & Vernon-Feagans (2010) studied paternal contributions of child literacy development for a sample of children who were 15 and 36 months of age and learned that children with higher expressive vocabulary skills had fathers who used more diverse vocabulary during interactions with their children. Highest level of education of both parents has been included as an indicator of SES, in addition to other factors. For example, Hollingshead Four Factor Index of Socioeconomic Status takes into account marital status, retired/employed status, educational attainment, and occupational prestige (Hollingshead, 1975).

Household Factors

Annual household income is also a widely utilized predictor of SES and was related to both early literacy and phonological awareness scores in the present study. Household income had the largest impact on early literacy scores compared to all other variables measured. These findings are not surprising given the dearth of research that has examined income and other variables related to SES (e.g. parental education) and its impact on children's early literacy outcomes (Bhattacharya, 2010; Caspe, 2009; Dickinson, & Snow, 1987; Evans, 2004; Farver et al., 2013; Hart, & Risley, 1995; Purcell-Gates, 1996; van Steensel, 2006; Whitehurst et al., 1999). Additionally, multiple contexts (home, neighborhood, and school) related to low-income communities may help account for the relation between SES and reading outcomes (Aikens & Barbarin, 2008).

Other factors, such as the languages spoken in the home and the language of books that the child listens to were not correlated with either emergent literacy or phonological awareness scores. Melby-Lervag and Lervag (2013) conducted a meta-

analysis on components of reading comprehension for first- and second- language learners and found that second-language learners only had small differences in phonological awareness scores ($d=-.08$) compared to first-language learners. Additionally, children who are English-language learners do not need parents to speak English in the home in order to become proficient in English (August et al., 2006).

Research has repeatedly shown a relationship between early reading skills and later reading abilities (Duncan et al., 2007; Lonigan, Purpura, Wilson, Walker, & Clancy-Menchetti, 2013). Past research and the present study has shown that many factors contribute to child emergent literacy skills including the quality of the home literacy environment and demographic variables. Not surprisingly, socioeconomic related variables (e.g. annual income, maternal education, etc.) explained a large proportion of variance in children's phonological awareness and early literacy scores. Additionally, it is clear that there are a number of factors that may mediate this relationship, including access to high quality early education centers and parent-child early interactions with print. However, future research is warranted due to a number of limitations within the present study.

Limitations

This study faced a number of limitations. First, self-report measures were utilized to examine the home literacy environment. Problems with self-report measures include the consistency motif (e.g. providing a consistent line in a series of answers) and social desirability (e.g. people want to appear in a favorable light) (Podsakoff & Organ, 1986). Parents may have filled out the questionnaire in a way that exaggerates their current literacy practices, resulting in less valid findings.

Additionally, parents did not answer every question, resulting in a large amount of missing data. Quite notably, a large percentage of parents did not answer questions regarding their child's independent pursuit of literacy activities in the home. This may be due to the format of the questionnaire. The questions assessing the child's independent pursuit of literacy activities appeared identical to the questions assessing parent-child literacy activities, with the only exception being the directions instructing parents to answer questions based how frequently their child independently pursued these activities. Future research using computer-based tests that require participants to answer all questions may help avert this problem. Additionally, while bi-lingual research assistants were available to help parent participants complete the questionnaire, few parents utilized this option. This may have further limited our sample because parents who have difficulty reading text may have been less apt to seek help or complete the questionnaire.

Second, the study may have been limited by the modest sample size, which resulted in reduced statistical power. This may have played a role in limiting the significance of some of the statistical analyses conducted. Transforming the data set may have resulted in less practical results and the inability to generalize findings of the sample. Larger samples tend to minimize the probability of errors and increase the generalizability of the results (Osborne & Costello, 2004). Some of the statistical procedures utilized require large sample sizes. For example, Guadagnoli & Velicer (1988) recommend a minimum sample size of 150 for a principal component analysis with variables that clearly define a component and have high loadings. While conservative approaches were taken to address the small sample size, results of this

study are not generalizable. Causation cannot be inferred from the results due to its correlational nature and lack of a true experimental design. Future studies with larger samples are needed.

Third, the cross-sectional nature of the present study prevents conclusions about change over time and stability of the findings. Children were assessed via the *PALS-K* in September 2012 and parents completed The *Home Experiences Questionnaire* in May and June of 2013. Parent reading behaviors and literacy interactions with their child prior to entering kindergarten may have differed in their frequency and duration after their entrance into kindergarten. Parents may be more likely to engage in activities with their child after beginning kindergarten due to requirements and assignments that actively engage parents after school hours.

Lastly, future researchers may choose to analyze different reading skills and abilities. The present study was limited to one measure (*PALS-K*), which was further divided into phonological awareness scores and early literacy scores. The *PALS-K* may not provide a thorough understanding of phonological awareness and early literacy scores because scores can vary based on the experience of the person conducting the assessment. Additionally, phonological awareness scores was comprised of only two subtests and may not fully encompass the construct. The early literacy skills score was summed from sub-tests assessing various skills and abilities and future research should look at the relationship amongst each subtest to learn if the tasks are measuring common skills and abilities. More comprehensive assessments measuring vocabulary, decoding, phoneme awareness, fluency, and comprehension should be included to gain a better understanding of the home literacy environment

and literacy skills. Longitudinal studies would provide further information about how home literacy activities affect children's literacy development over time.

Conclusions and Future Directions

The present study analyzed the role of the home literacy environment for kindergarten students of a small low-income community. Findings suggest that the home literacy environment may play a more influential role for early literacy skills and phonological awareness scores as measured by the *PALS-K*. Additionally, the inclusion of child, parent, and household variables explained a large percentage of the variance amongst emergent literacy scores. Income was the largest predictor of early literacy scores and phonological awareness scores. These findings suggest that factors associated with socioeconomic level may play a large role in early literacy and phonological scores, however other factors may mediate this relationship.

There is a need to identify specific mediating and moderating variables that reduce risk and increase resiliency in children at higher risks for reading difficulty. To specify, moderating variables affect the direction and/or strength of the relationship between the predictor variable and the outcome. Mediating variables account for the relationship between predictor and the outcome (Baron & Kenney, 1986). For example, a moderating variable may be a diagnosis of a cognitive impairment (Davidse, de Jong, Bus, Huijbregts, & Swaab, 2011), whereas dialogic reading practices and the complexity of parent-child conversations may serve as a mediator (Lever & Senechal, 2011; Mol & Bus, 2011). While a comprehensive understanding of these various influences may be complex, current statistical modeling techniques

can be employed to learn which variables are more substantive when predicting children's emergent literacy skills.

Additionally, a biopsychosocial model incorporating developmental risk and protective factors within a developmental trajectory framework may be warranted. Understanding cognitive abilities, stressors, mental health, neighborhood factors, resources available, support systems and self-motivation are all factors that may impact a child's ability to learn (Evans, 2004; Molfese, Modglin, & Molfese, 2003). Furthermore, it is important to learn how these factors may mediate the relationship between the home literacy environment and emergent literacy skills. For example, past research has identified cognitive control, a term that includes inhibition, attention, and memory, may serve as a mediator between home literacy environment measures and emergent literacy skills (Davidse et al., 2011). Additionally, early educational experiences may mediate the role that SES may have on emergent literacy skills for children from low-income homes, whereas other factors, such as the number of books in the home may not. Thus, the understanding of organic root causes and the reciprocal relationships amongst variables associated with individuals at risk for reading difficulties are needed to inform best practices and interventions that can be utilized inside and outside of the home environment to improve child literacy outcomes.

Appendices

Appendix A: English Home Experiences Questionnaire

HOME EXPERIENCES QUESTIONNAIRE

M.A. Evans; B.A. Levy & D. Jared, 2001

In research it is important to understand the background of participants so that findings from different studies can be put together and understood. Please complete the following questions concerning your family and your child who is in the study. Because some questions deal with things related to reading, the parent who is most familiar with the child's activities in this area should complete this survey.

Today's Date: _____

Year Month Day

- 1.** My child in the study is _____ , born on _____
 (full name) Year Month Day

He/she is in what school and grade

What is his/her ethnicity (please list all that apply)

Did your child attend an early education setting (e.g. day care, head start) ☐Yes ☐No

If Yes, Where did they attend?

How long did they attend? _____

- 2. Circle who is completing the survey?**
Mother	Father
Both	Other _____
(specify)

- 3. List the sex and age of each child in your household:**

- 4. Circle which best describes your home:**
Father single-parent	Mother single-parent
Joint custody	Two parent
Other _____
(specify)	

- 5. Place an X beside the highest level of schooling the child's caregiving mother has completed or is currently enrolled in:**

Did not complete elementary school

Elementary School

High school grade 10

High school grade 12 or 13

Community college

____ Undergraduate university
____ Post graduate school (e.g. MA, PhD, MD)

6. What is her current occupation? _____
7. What is her ethnicity (please list all that apply) _____
8. Place an X beside the highest level of schooling the child's caregiving father has completed or is currently enrolled in:

Did not complete elementary school

____ Elementary School
____ High school grade 10
____ High school grade 12 or 13
____ Community college
____ Undergraduate university
____ Post graduate school (e.g. MA, PhD, MD)

9. What is his current occupation? _____

10. What is his ethnicity (please list all that apply) _____

11. Please place an X beside the category of your annual family income before taxes:

____ Under \$16,000
____ Between \$16,000-\$26,000
____ Between \$26,000-\$40,000
____ Between \$40,000-\$55,000
____ ~~Between~~ \$55,000-\$70,000
____ Between \$70,000-\$85,000
____ Between \$85,000- \$100,000
____ Over \$100,000

12. Circle how often your home gets a newspaper:

Occasionally Once a week 2-3 a week Daily

13. Circle how many books adults in your home borrow or buy in 6 months:

0 1-2 About 5 About 10 About 15-20 25+

14. Circle roughly how many children's books you have in your home:

1-10 10-20 20-35 35-75 75-150 150-200 200+

15. Circle how many days a week an adult in your home typically manages to read with your child:

0 1 2 3 4 5 6 7

16. On a day when an adult reads to your child at home, for how many minutes would this usually be?

Up to 10 min 10-20 min 20-30 min 30-40 min 40-50 min 50-60 min An hour +

17. Circle roughly how many times you have read the following types of books with your child in the last 4 months as

Never; 1-3 times (maybe once a month); 7-15 times (maybe 2-3 times in a month); 20-30 times (maybe 1-2 times a week); 40-60 times (maybe 3-4 times a week); 80 or more times (about every day).

ABC/alphabet/letter sound books	Never	Once a month	2-3 times in a month	1-2 times a week	3-4 times a week	About every day
Books with poems or stories that rhyme	Never	Once a month	2-3 times in a month	1-2 times a week	3-4 times a week	About every day
Long "classic children's books (eg. , Black Beauty, Wizard of Oz, Harry Potter)	Never	Once a month	2-3 times in a month	1-2 times a week	3-4 times a week	About every day
Chapter books (e.g., shortened simplified classic books; Babysitters' Club)	Never	Once a month	2-3 times in a month	1-2 times a week	3-4 times a week	About every day
Illustrated non-fiction children's books (e.g. The American Revolution from A to Z)	Never	Once a month	2-3 times in a month	1-2 times a week	3-4 times a week	About every day
Short illustrated children's books (eg., Red Riding Hood, Bernstein Bears)	Never	Once a month	2-3 times in a month	1-2 times a week	3-4 times a week	About every day
Children's magazines (eg., Chirp Chickadee, Sesame Street Magazine)	Never	Once a month	2-3 times in a month	1-2 times a week	3-4 times a week	About every day

18. For a variety of reasons, adults differ in how well they read. Circle how well the child's mother reads:

Very Below Average Below Average About Average Above Average

19. Circle how well the father reads:

Very Below Average Below Average About Average Above Average

20. Circle how old your child was when you first started reading to him/her (if applicable):

Under 2 months 2-6 months 7-11 months 12-24 months

2-3 years 4 years 4 years or more

21. Circle how old your child was when you began to read to him/her for a half hour a week or more?

Under 2 months 2-6 months 7-11 months

12-24 months 2-3 years 4 years Not yet

22. Circle how old your child was when you began to read to him/her for an hour a week or more?

Under 2 months 2-6 months 7-11 months

12-24 months 2-3 years 4 years Not yet

23. If you have had any concerns over your child's development, such as the way he/she talks, motor problems, hearing or visions problems, etc., please list them here.

24. Have you consulted a professional over these concerns? If yes, please describe.

25. Has or is your child receiving treatment for these concerns? If yes, please describe.

26. What language or languages are used in your home? _____

27. What language does our child most easily understand? _____

28. What language does your child most easily speak? _____

29. What is the language of books your child usually looks at or listens to at home?

30. If your child looks at/listens to books in other languages from that in #27, list it (them) here:

31. We are interested in the literacy activities and materials children might or not be engaged in at home. Listed below are different activities. We do not expect children would pursue all of them. Rate how often your child has been involved in each of them at home in the last four months.

HOW OFTEN THEY ARE INVOLVED: CIRCLE

- 1 if never**
- 2 if rarely, maybe once a month**
- 3 if from time to time; 7-15 times or 2-3 times a month**
- 4 if often; 20-30 times or about once/twice a week**
- 5 if frequently; 40-60 times or 3-4 times a week**
- 6 if frequently, almost every day or over 80 times.**

Playing with magnetic letters/letter cards	1	2	3	4	5	6
Practicing letter names, individual words	1	2	3	4	5	6
Watching you print notes	1	2	3	4	5	6
Reading signs or labels	1	2	3	4	5	6
Educational Games (Spill & Spell, Boggle, etc.)	1	2	3	4	5	6
Listening to books you read	1	2	3	4	5	6
Tracing or copying letters or words	1	2	3	4	5	6
Listening to storybook tapes	1	2	3	4	5	6
Looking at magazines/books	1	2	3	4	5	6
Learning letter sounds/word parts	1	2	3	4	5	6
Visiting public library	1	2	3	4	5	6
Playing computer games involving reading	1	2	3	4	5	6
Printing his/her name	1	2	3	4	5	6
Using children's picture dictionary	1	2	3	4	5	6
Watching educational t.v. (e.g. Sesame Street)	1	2	3	4	5	6
Using alphabet books	1	2	3	4	5	6
Listening to rhyming words/rhyming stories/poems	1	2	3	4	5	6
Writing a note or little story	1	2	3	4	5	6
Reading out loud	1	2	3	4	5	6
Spelling words	1	2	3	4	5	6
Doing word games (e.g. word find)	1	2	3	4	5	6

Directions: If your child has been involved in any of the activities, rate the extent to which he/she initiates the activity versus being led to do so by you in the last four months.

HOW INDEPENDENT IN PURSUIT: CIRCLE

- 1** if never
- 2** if rarely, maybe once a month
- 3** if from time to time; 7-15 times or 2-3 times a month
- 4** if often; 20-30 times or about once/twice a week
- 5** if frequently; 40-60 times or 3-4 times a week
- 6** if frequently, almost every day or over 80 times.

Playing with magnetic letters/letter cards	1	2	3	4	5	6
Practicing letter names, individual words	1	2	3	4	5	6
Watching you print notes	1	2	3	4	5	6
Reading signs or labels	1	2	3	4	5	6
Educational Games (Spill & Spell, Boggle, etc.)	1	2	3	4	5	6
Listening to books you read	1	2	3	4	5	6
Tracing or copying letters or words	1	2	3	4	5	6
Listening to storybook tapes	1	2	3	4	5	6
Looking at magazines/books	1	2	3	4	5	6
Learning letter sounds/word parts	1	2	3	4	5	6
Visiting public library	1	2	3	4	5	6
Playing computer games involving reading	1	2	3	4	5	6
Printing his/her name	1	2	3	4	5	6
Using children's picture dictionary	1	2	3	4	5	6
Watching educational t.v. (e.g. Sesame Street)	1	2	3	4	5	6
Using alphabet books	1	2	3	4	5	6
Listening to rhyming words/rhyming stories/poems	1	2	3	4	5	6
Writing a note or little story	1	2	3	4	5	6
Reading out loud	1	2	3	4	5	6
Spelling words	1	2	3	4	5	6
Doing word games (e.g. word find)	1	2	3	4	5	6

Appendix B: Spanish Home Experiences Questionnaire

EXPERIENCIAS DE HOGAR CUESTIONARIO

M. A. Evans; B.A. Jared Levy & D., 2001

En la investigación, es importante entender el trasfondo de los participantes para que se puedan juntar y comprender los resultados de diferentes estudios. Por favor complete las siguientes preguntas sobre su familia y su hijo que está en el estudio. Debido a que algunas preguntas tienen que ver con cosas relacionadas con la lectura, el padre que está más familiarizado con las actividades del niño en esta área debe completar esta encuesta.

La Fecha de Hoy _____
Año Mes Día

1. Mi hijo/a en el estudio es _____, Nacido/a _____
Nombre Completo Año Mes Día

Él/Ella está en la escuela, y grado _____

¿Asistió su hijo/a una programa de educación temprana (por ejemplo, guardería infantil, Head Start) ☐ Sí ☐ No

¿En caso afirmativo, donde asistió su hijo/hija? _____

¿Por cuanto tiempo? _____

2. Circule quien está completando el estudio? Madre Padre
Ambos Otro _____
(Especifique)

3. Anote el sexo y la edad de cada niño en su hogar _____

4. Describa su hogar: Padre Soltero Madre Soltera
Custodia Compartida Dos Padres
Otro _____
(Especifique)

5. Marque con una X al lado del nivel de curso más alto que la madre del niño ha completado o está matriculado en:

____ No ha completado la escuela primaria

____ Escuela primaria

____ Grado de la escuela secundaria 10

____ Grado de secundaria de 12 o 13

____ La comunidad universitaria

____ Licenciatura universitaria

____ Postgrado escuela (por ejemplo, MA, PhD, MD)

6. ¿Cuál es su ocupación actual? _____

- 7.Cuál es su origen étnico? (por favor indique todas las que apliquen)

8. Marque con una X al lado del nivel de curso más alto que el padre del niño ha completado o está matriculado en:

____ No ha completado la escuela primaria

____ Escuela primaria

____ Grado de la escuela secundaria 10

____ Grado de secundaria de 12 o 13

____ La comunidad universitaria

____ Licenciatura universitaria

____ Postgrado escuela (por ejemplo, MA, PhD, MD)

9. ¿Cuál es su ocupación actual?

- 10.Cuál es su origen étnico? (por favor indique todas las que apliquen)

11. Por favor, marque con una X al lado de la categoría de su ingreso familiar anual antes de impuestos:

☐ Bajo \$16,000
☐ Entre \$16,000-\$26,000
☐ Entre \$26,000-\$40,000
☐ Entre \$40,000-\$55,000
☐ Entre \$55,000-\$70,000
☐ Entre \$70,000-\$85,000
☐ Entre \$85,000- \$100,000
☐ Más de \$100,000

12. Marque con un círculo con qué frecuencia su casa recibe un periódico:

Ocasionalmente Una vez a la semana 2-3 veces la semana A Diario

13. Circule ¿Cuántos libros los adultos en su casa han tomado prestado, o han comprado en los últimos 6 meses :

0 1-2 Alrededor de 5 Aproximadamente 10 15-20 25 +

14. Circule aproximadamente cuántos libros para niños usted tiene en su hogar:

1-10 10-20 20-35 35-75 75-150
150-200 200+

15. Circule cuántos días a la semana un adulto en su hogar típicamente lee con su hijo(a):

0 1 2 3 4 5 6 7

16. ¿En el día cuando un adulto lee con su hijo(a), por cuántos minutos sería esto usualmente?

Hasta 10 min 10-20 min 20-30 min 30-40 min 40-50 min
50-60 min Una hora +

17. Circule aproximadamente cuántas veces usted ha leído los siguientes tipos de libros con su hijo(a) en los últimos 4 meses:
Nunca; 1-3 veces (tal vez una vez al mes); 7-15 veces (tal vez 2-3 veces en un mes); 20-30 veces (tal vez 1-2 veces a la semana); 40-60 veces (tal vez 3-4 veces a la semana); 80 o más veces (casi todos los días).

ABC/alfabeto/libros de sonido de letras	Nunca	tal vez una vez al mes	tal vez 2-3 veces en un mes	tal vez 1-2 veces a la semana	tal vez 3-4 veces a la semana	casi todos los días
Libros con poemas o historias que riman	Nunca	tal vez una vez al mes	tal vez 2-3 veces en un mes	tal vez 1-2 veces a la semana	tal vez 3-4 veces a la semana	casi todos los días
Largos “libros clásicos para niños (Black Beauty, Wizard of Oz, Harry Potter)	Nunca	tal vez una vez al mes	tal vez 2-3 veces en un mes	tal vez 1-2 veces a la semana	tal vez 3-4 veces a la semana	casi todos los días
Libros de capítulos (libros clásicos que son acortados; Babysitters’ Club)	Nunca	tal vez una vez al mes	tal vez 2-3 veces en un mes	tal vez 1-2 veces a la semana	tal vez 3-4 veces a la semana	casi todos los días
Libros para niños que son ilustradas y no ficción (The American Revolution from A to Z)	Nunca	tal vez una vez al mes	tal vez 2-3 veces en un mes	tal vez 1-2 veces a la semana	tal vez 3-4 veces a la semana	casi todos los días
Libros para niños que son cortos e ilustradas (Red Riding Hood, Bernstein Bears)	Nunca	tal vez una vez al mes	tal vez 2-3 veces en un mes	tal vez 1-2 veces a la semana	tal vez 3-4 veces a la semana	casi todos los días
Revistas para niños (Chirp Chickadee, Sesame Street Magazine)	Nunca	tal vez una vez al mes	tal vez 2-3 veces en un mes	tal vez 1-2 veces a la semana	tal vez 3-4 veces a la semana	casi todos los días

18. Por una variedad de razones, adultos difieren en la forma que leen. Circule lo bien que lee la madre del niño(a):

Muy por debajo del promedio Debajo del promedio Del promedio Sobre del promedio

19. Circule lo bien que lee el padre:

Muy por debajo del promedio Debajo del promedio Del promedio Sobre del promedio

20. Circule cuántos años tenía su hijo(a) cuando usted primer empezó a leer con el/ella (si se aplica):

Menos de 2 meses 2-6 meses 7-11 meses 12-24 meses 2-3 años
4 años 4 años o mas

21. Circule cuántos años tenía su hijo(a) cuando usted le empezó a leer por media hora o más a la semana con el/ella:

Menos de 2 meses 2-6 meses 7-11 meses 12-24 meses 2-3 años
4 años Todavía no

22. Circule cuantos años tenía su hijo(a) cuando usted le empezó a leer por un hora o más a la semana con el/ella:

Menos de 2 meses 2-6 meses 7-11 meses 12-24 meses 2-3 años
4 años Todavía no

23. Si usted ha tenido algunos preocupaciones sobre el desarrollo de su hijo(a), por ejemplo la manera en que él/ella habla, problemas motores, problemas de audición o visión, etc., por favor apuntelas aquí.

24. ¿Alguna vez ha consultado un profesional sobre estas preocupaciones? En caso afirmativo, por favor describa.

25. ¿Su hijo(a) ha recibido o recibe ahora tratamiento por estas preocupaciones? En caso afirmativo, por favor describa.

26. ¿Qué idioma o idiomas se usa en su hogar? _____

27. ¿Qué idioma es más fácil de entender para su hijo(a)? _____

28. ¿Qué idioma habla su hijo(a) más fácilmente? _____

29. ¿En qué idioma están los libros que su hijo(a) usualmente mira o escucha en su hogar?

30. Si su hijo(a) mira o escucha libros en otros idiomas, esos dé #27 lístalas aquí:

31. Estamos interesados en las actividades de alfabetización y los materiales que niños pueden estar o no estar involucrados en sus hogares. Abajo hay diferentes actividades. No esperamos que los niños hagan todos estos. Califique cuantas veces su hijo(a) ha estado involucrado en cada uno en **los últimos cuatro meses** dentro de su hogar.

CUANTAS VECES ESTAN INVOLUCRADOS: CIRCULE

- 1 si nunca
 2 si raramente, tal vez una vez al mes
 3 si de tiempo a tiempo; 7-15 veces o 2-3 veces al mes
 4 si con frecuencia; 20-30 veces o casi 1-2 veces a la semana
 5 si frecuentemente; 40-60 veces o 3-4 veces a la semana
 6 si frecuentemente, casi todos los días o más de 80 veces.

Jugando con letras magnéticas/tarjetas de letras	1	2	3	4	5	6
Practicando letras, palabras individuales	1	2	3	4	5	6
Viendo usted imprimir notas	1	2	3	4	5	6
Leyendo signos o etiquetas	1	2	3	4	5	6
Juegos educativos (Spill & Spell, Boggle, etc.)	1	2	3	4	5	6
Escuchando libros que usted lee	1	2	3	4	5	6
Copiando letras o palabras	1	2	3	4	5	6
Escuchando libros en cintas	1	2	3	4	5	6
Viendo revistas/libros	1	2	3	4	5	6
Aprendiendo el sonido de letras/partes de palabras	1	2	3	4	5	6
Visitando la librería publica	1	2	3	4	5	6
Jugando juegos en la computadora involucrando leer	1	2	3	4	5	6
Escribiendo su nombre	1	2	3	4	5	6
Usando un diccionario para niños con imágenes	1	2	3	4	5	6
Viendo televisión educativo. (e.g. Sesame Street)	1	2	3	4	5	6
Usando libros de alfabeto	1	2	3	4	5	6
Escuchando palabras que rimen/historias que rimen/poemas	1	2	3	4	5	6
Escribiendo una nota o historia corta	1	2	3	4	5	6
Leyendo en voz alta	1	2	3	4	5	6
Palabras de ortografía	1	2	3	4	5	6
Haciendo juegos de palabras (word find)	1	2	3	4	5	6

Si su hijo(a) ha estado involucrado en cualquiera de estas actividades, califique cuanto él/ella inicia la actividad en vez de hacerlo cuando usted le diga **en los últimos cuatro meses**.

GRADO DE INDEPENDENCIA: CIRCULE

- 1** si nunca
- 2** si raramente, tal vez una vez al mes
- 3** si de tiempo a tiempo; 7-15 veces o 2-3 veces al mes
- 4** si con frecuencia; 20-30 veces o casi 1-2 veces a la semana
- 5** si frecuentemente; 40-60 veces o 3-4 veces a la semana
- 6** si frecuentemente, casi todos los días o más de 80 veces.

Jugando con letras magnéticas/tarjetas de letras	1	2	3	4	5	6
Practicando letras, palabras individuales	1	2	3	4	5	6
Viendo usted imprimir notas	1	2	3	4	5	6
Leyendo signos o etiquetas	1	2	3	4	5	6
Juegos educativos (Spill & Spell, Boggle, etc.)	1	2	3	4	5	6
Escuchando libros que usted lee	1	2	3	4	5	6
Copiando letras o palabras	1	2	3	4	5	6
Escuchando libros en cintas	1	2	3	4	5	6
Viendo revistas/libros	1	2	3	4	5	6
Aprendiendo el sonido de letras/partes de palabras	1	2	3	4	5	6
Visitando la librería pública	1	2	3	4	5	6
Jugando juegos en la computadora involucrando leer	1	2	3	4	5	6
Escribiendo su nombre	1	2	3	4	5	6
Usando un diccionario para niños con imágenes	1	2	3	4	5	6
Viendo televisión educativo. (e.g. Sesame Street)	1	2	3	4	5	6
Usando libros de alfabeto	1	2	3	4	5	6
Escuchando palabras que rimen/historias que rimen/poemas	1	2	3	4	5	6
Escribiendo una nota o historia corta	1	2	3	4	5	6
Leyendo en voz alta	1	2	3	4	5	6
Palabras de ortografía	1	2	3	4	5	6
Haciendo juegos de palabras (word find)	1	2	3	4	5	6

Appendix C: Portuguese Home Experiences Questionnaire

QUESTIONÁRIO DE EXPERIÊNCIAS EM CASA
M.A. Evans; B.A. Levy & D. Jared, 2001

Na pesquisa é importante compreender o contexto dos participantes para que os resultados de diferentes estudos podem ser colocados juntos e entendidos. Por favor, completa as seguintes questões relativas à sua família e seu filho que está em estudo. Porque algumas perguntas lidam com coisas relacionadas à leitura, o pai/mae, que está mais familiarizado com atividades da criança nessa área deve preencher este inquérito.

Data: _____
Ano Mês Dia

1. O meu filho/a neste estudo é _____, nasceu _____
(Nome completo) Ano Mês Dia

Ele/a está em que escolar e grau? _____

Qual é a/o sua etnicidade (por favor, liste todas as opções aplicáveis) _____

A sua criança assistiu uma educação precoce (por exemplo: Creche, Headstart)? ☐ Sim ☐ Não
se sim, Aonde assistiram o programa? _____

(E, se aplicável)

Quanto tempo esteve no programa? _____

2. Marca com um círculo quem esta completando esta pesquisa?

Mãe Pai Ambos Outros _____
(especificar)

3. Sexo e idade de cada criança na sua casa:

4. Marca com um círculo na opção que melhor decreve a sua casa:

Father single-parent Mother single-parent
Joint custody Two parent

Outros _____
(especificar)

5. Ponha um X ao lado do nível mais alto de escolaridade da mãe da criança, que foi concluída ou está atualmente matriculado em:

☐ Não tenham concluído o ensino fundamental
☐ Ensino Médio Grau 10
☐ Ensino Médio Grau 12 ou 13
☐ Faculdade
☐ Graduação Universitária
☐ Escola Pós Graduação (ex. MA, PhD, MD)

6. Qual é a sua ocupação atual? _____

7. Qual é a sua etnicidade (por favor de escrever todas as opções aplicáveis)

8. Ponha um X ao lado do nível mais alto de escolaridade da mãe da criança, que foi concluída ou está atualmente matriculado em:

☐ Não tenham concluído o ensino fundamental
☐ Ensino Fundamental
☐ Ensino Médio Grau 10
☐ Ensino Médio Grau 12 ou 13
☐ Faculdade
☐ Graduação Universitária
☐ Escola Pós Graduação (ex. MA, PhD, MD)

9. Qual é a sua ocupação atual? _____

10. Qual é a sua etnicidade (por favor de escrever todas as opções aplicáveis)

11. Por favor de colocar um X ao lado da categoria do seu rendimento anual antes dos impostos:

☐ Sob \$16,000
☐ Entre \$16,000-\$26,000
☐ Entre \$26,000-\$40,000
☐ Entre \$40,000-\$55,000
☐ Entre \$55,000-\$70,000
☐ Entre \$70,000-\$85,000
☐ Entre \$85,000- \$100,000
☐ Mais de \$100,000

12. Círculo quantas vezes a sua casa obtém um jornal:

Ocasional Uma vez por semana 2-3 vezes por semana Diário

13. Círculo quantos livros os adultos na sua casa compra ou empresta num período de 6 meses:
- 0 1-2 Cerca de 5 Cerca de 10 Cerca de 15-20 25+
14. Círculo mais ou menos quantos livros de criança tem na sua casa:
- 1-10 10-20 20-35 35-75
- 75-150 150-200 200+
15. Círculo quantas vezes por semana um adulto na sua casa lê a sua criança:
- 0 1 2 3 4 5 6 7
16. Geralmente, quando um adulto na sua casa lê a sua criança, mais ou menos é por quantos minutos?
- Até 10 min 10-20 min 20-30 min 30-40 min
- 40-50 min 50-60 min Uma hora +
17. Círculo mais ou menos quantas vezes você leu estes livros com a sua criança nos últimos 4 meses **Nunca; 1-3 vezes (talvez uma vez num mês); 7-15 vezes (talvez 2-3 vezes num mês); 20-30 vezes (talvez 1-2 vezes numa semana); 40-60 vezes (talvez 3-4 vezes numa semana); 80 ou mais vezes (quase todos os dias).**

ABC/alfabeto/livros de soletrar	Nunca	talvez uma vez num mês	talvez 2-3 vezes num mês	talvez 1-2 vezes numa semana	talvez 3-4 vezes numa semana	quase todos os dias
Livros com poemas ou histórias quem rimam	Nunca	talvez uma vez num mês	talvez 2-3 vezes num mês	talvez 1-2 vezes numa semana	talvez 3-4 vezes numa semana	quase todos os dias
Longa“livros clássicos infantis (ex. Beleza Negra, O Mago Oz, Harry Potter)	Nunca	talvez uma vez num mês	talvez 2-3 vezes num mês	talvez 1-2 vezes numa semana	talvez 3-4 vezes numa semana	quase todos os dias
Livros de capítulo (ex. Livros clássicos simplificado; Clube das Babás)	Nunca	talvez uma vez num mês	talvez 2-3 vezes num mês	talvez 1-2 vezes numa semana	talvez 3-4 vezes numa semana	quase todos os dias
Livros ilustrados de crianças non-ficção (ex. A Revolução Americana de A à Z)	Nunca	talvez uma vez num mês	talvez 2-3 vezes num mês	talvez 1-2 vezes numa semana	talvez 3-4 vezes numa semana	quase todos os dias
Livros ilustrados curtos infantis (ex., Chapeuzinho Vermelho, Ursos de Bernstein)	Nunca	talvez uma vez num mês	talvez 2-3 vezes num mês	talvez 1-2 vezes numa semana	talvez 3-4 vezes numa semana	quase todos os dias
Revistas de Crianças (ex., Chapim Trinado, Revista de Sesame Street)	Nunca	talvez uma vez num mês	talvez 2-3 vezes num mês	talvez 1-2 vezes numa semana	talvez 3-4 vezes numa semana	quase todos os dias

18 Por uma variedade de razões, os adultos diferem em tão bem eles lêem. Círculo que tão bem a mãe da criança lê:

Muito Abaixo da Média Abaixo da Média Sobre a Média Acima da Média

19 Círculo que tão bem lê o pai:

Muito Abaixo da Média Abaixo da Média Sobre a Média Acima da Média

20 Círculo quantos anos a sua criança tinha quando você começou-lhe a ler:

Sob 2 meses 2-6 meses 7-11 meses 12-24 meses 2-3 anos
4 anos 4 anos ou mais

21 Círculo quantos anos sua criança tinha quando você começou-lhe a ler por meia hora por semana ou mais?

Sob 2 meses 2-6 meses 7-11 meses 12-24 meses 2-3 anos
4 anos Ainda Não

22 Círculo quantos anos a sua criança tinha quando você começou-lhe a ler por uma hora por semana ou mais?

Sob 2 meses 2-6 meses 7-11 meses 12-24 meses 2-3 anos
4 anos Ainda Não

23 Se você teve dúvidas sobre o desenvolvimento do seu filho, tais como a maneira que ele fala, problemas motores, auditivos ou problemas de visões, etc., por favor, liste-os aqui.

24 Você já consultou um profissional sobre estas preocupações? Se sim, por favor de descrever.

25 Tem ou esta seu filho recebendo tratamento por estas preocupações? Se sim, por favor de descrever.

26 Qual é a língua ou línguas usadas em casa? _____

27 Qual é a linguagem que a sua criança entende mais facilmente?

28 Qual é a linguagem que a sua criança fala mais facilmente?

29 Geralmente, qual é o idioma dos livros que a sua criança usa ou escuta em casa?

30 Se a sua criança usa ou escuta livros em outros idiomas da lista do #27, por favor the listar:

- 31 Estamos interessados nas atividades de alfabetização e materiais crianças podem ou não estar envolvidas em casa. Listados abaixo são atividades diferentes. Não esperamos que as crianças fariam todos eles. Avalia quantas vezes seu filho esteve envolvido em cada um **nos últimos quatro meses**.

QUANTAS VEZES ESTA ENVOLVIDO: CÍRCULO

- 1 se nunca**
2 raramente, talvez uma vez por mês
3 de tempo ao tempo; 7-15 vezes ou 2-3 vezes por mês
4 se muitas vezes; 20-30 vezes ou sob uma vez/duas vezes por semana
5 frequentemente; 40-60 vezes ou 3-4 vezes por semana
6 frequentemente, quase todos os dias ou mais de 80 vezes.

Jogar com cartões e letras magnéticas	1	2	3	4	5	6
Praticando os nomes de letras e palavras individuais	1	2	3	4	5	6
Assistindo você imprimir notas	1	2	3	4	5	6
Sinais de leitura ou rolos	1	2	3	4	5	6
Jogos educativos (Spill & Spell, Boggle, etc.)	1	2	3	4	5	6
Escutar os livros que você lê	1	2	3	4	5	6
Rastrear ou copiar letras ou palavras	1	2	3	4	5	6
Ouvir fitas de contos de fadas	1	2	3	4	5	6
Olhando as/os revistas/livros	1	2	3	4	5	6
Aprendizagem dos sonidos das letras e palavras	1	2	3	4	5	6
Visitar a biblioteca pública	1	2	3	4	5	6
Jogando no computador envolvendo a leitura	1	2	3	4	5	6
Imprimir o seu nome	1	2	3	4	5	6
Usando o dicionário de imagens para crianças	1	2	3	4	5	6
Assistindo TV educativo. (ex. Sesame Street)	1	2	3	4	5	6
Usando livro de alfabeto	1	2	3	4	5	6
Escutar palavras, histórias e poemas que rimam	1	2	3	4	5	6
Escrever uma nota ou pequena história	1	2	3	4	5	6
Ler a voz alta	1	2	3	4	5	6
Palavras de ortografia	1	2	3	4	5	6
Jogos de palavras (ex. Palavras cruzadas, localizar palavras)	1	2	3	4	5	6

Se seu filho tem estado envolvido em qualquer uma das atividades, na medida em que ele inicia a atividade versus sendo levado a fazê-lo por você nos últimos quatro meses.

QUANTAS VEZES ESTA ENVOLVIDO: CÍRCULO

- 1 se nunca
- 2 raramente, talvez uma vez por mês
- 3 de tempo ao tempo; 7-15 vezes ou 2-3 vezes por mês
- 4 se muitas vezes; 20-30 vezes ou sob uma vez/duas vezes por semana
- 5 frequentemente; 40-60 vezes ou 3-4 vezes por semana
- 6 frequentemente, quase todos os dias ou mais de 80 vezes.

Jogar com cartões e letras magnéticas	1	2	3	4	5	6
Praticando os nomes de letras e palavras individuais	1	2	3	4	5	6
Assistindo você imprimir notas	1	2	3	4	5	6
Sinais de leitura ou rotulos	1	2	3	4	5	6
Jogos educativos (Spill & Spell, Boggle, etc.)	1	2	3	4	5	6
Escutar os livros que você lê	1	2	3	4	5	6
Rastrear ou copiar letras ou palavras	1	2	3	4	5	6
Ouvir fitas de contos de fadas	1	2	3	4	5	6
Olhando as/os revistas/livros	1	2	3	4	5	6
Aprendizagem dos sonidos das letras e palavras	1	2	3	4	5	6
Visitar a biblioteca pública	1	2	3	4	5	6
Jogando no computador envolvendo a leitura	1	2	3	4	5	6
Imprimir o seu nome	1	2	3	4	5	6
Usando o dicionário de imagens para crianças	1	2	3	4	5	6
Assistindo TV educativo. (ex. Sesame Street)	1	2	3	4	5	6
Usando livro de alfabeto	1	2	3	4	5	6
Escutar palavras, histórias e poemas que rimam	1	2	3	4	5	6
Escrever uma nota ou pequena história	1	2	3	4	5	6
Ler a voz alta	1	2	3	4	5	6
Palavras de ortografia	1	2	3	4	5	6
Jogos de palavras (ex. Palavras cruzadas, localizar palavras)	1	2	3	4	5	6

Appendix D: English Informed Consent

INFORMED CONSENT FORM

Understanding Home Literacy Practices

Susan Rattan, Principal Investigator University of Rhode Island Psychology Department 10 Chafee Road Kingston, RI 02881 (401) 874-4246

DESCRIPTION OF THE RESEARCH AND THE RIGHTS OF PARTICIPANTS

We are inviting parents who currently have a child in kindergarten to participate in a study to understand literacy behaviors in the home environment. Children's scores on early literacy assessments that were measured in September 2012 will also be utilized in order to understand measures of early literacy in relation to home reading practices. If you have any questions or concern, you may contact the student investigator, Jennifer Dupont, who can be reached at (401) 617-2148 or her major professor, Susan Rattan, Ph.D., at (401) 874-4246.

Description of the project

The purpose of this study is to gain a better understanding of literacy behaviors in the home environment. Parents are asked to complete a survey that will take approximately 15-30 minutes to complete. Responses to the items will be collected by returning a sealed envelope with the survey enclosed with participants' child, mailed, dropped off at the child's school, or completed before or after school with the aid of a bilingual student researcher if needed (whichever method the participant prefers). Teachers and administration are asked to keep the unopened surveys in a manila envelope to be collected by the investigator. All information will be kept in a locked file cabinet in the Principal Investigator's office located at the University of Rhode Island.

Children's assessment scores which have been previously measured earlier in the school year using the Phonological Awareness Literacy Screening for Kindergarten (*PALS-K*) will be utilized in order to better understand the relationship between the Home Literacy Environment and measures of early literacy.

Risks or Discomforts

The possible risks or discomforts of the study are minimal, although you may feel some embarrassment answering questions about private matters.

Benefits of this study

Although there are no direct benefits of the study, your answers will help increase the knowledge regarding the impact of reading and literacy activities in the home.

Confidentiality

Any information collected during this project that could identify you or your child will be kept confidential. Meaning, nobody outside of the project will be given information that could identify you or your child. The information will be stored in a locked cabinet, and will be available only to investigators. All information that could identify you or your child will be kept for three years and then destroyed. The information collected in this project may be shared with school administrators, published in professional journals or presented at professional conferences but no information that could identify you or your child will be included.

Decision to quit at any time

The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question. Withdrawing from the study will not affect your child's status at the school.

Rights and Complaints:

Participation in this study is not expected to be harmful or injurious to you. However, if this study causes you any injury, you should call Jennifer Dupont at the University of Rhode Island at (401-617-2148). If you have other concerns about this study or if you have questions about your rights as a research participant, you may contact the University of Rhode Island's Vice President for Research, 70 Lower College Road, Suite 2, URI, Kingston, RI, (401) 874-4246.

I have read the consent form and have no further questions about my participation in this project at this time. I understand that I may ask any additional questions at any time, that my participation in this project is voluntary, and that I may withdraw from this project at any time.

If you agree to participate and allow your child's literacy assessment scores to be released, please complete and sign this form, and return it to your child's classroom teacher as soon as possible

Participant Signature _____ Date _____

Printed name _____

Child name _____

Appendix E: Spanish Informed Consent

FORMA DE CONSENTIMIENTO INFORMADO Entendiendo las Prácticas de Alfabetización en la Casa

Susan Rattan, PhD, Investigadora Principal University of Rhode Island Psychology Department 10 Chafee Road Kingston, RI 02881 401-617-2148

DESCRIPCIÓN DE LA INVESTIGACIÓN Y DE LOS DERECHOS DE LOS PARTICIPANTES

Estamos invitando padres que corrientemente tienen un hijo(a) en kindergarten para participar en un estudio para entender los funcionamientos de alfabetismo en el ambiente de hogares. Puntaciones de los niños en las evaluaciones de alfabetización que se midieron en septiembre 2012 también van hacer utilizados para entender medidas de alfabetización temprana en relación con las prácticas de lectura en casa. Si tiene algunas preguntas o preocupaciones usted puede ponerse en contacto con la investigadora estudiante, Jennifer Dupont, quien se puede contactar al (401) 617-2148 o su profesora, Susan Rattan, Ph.D., al (401) 874-4246.

Descripción del Proyecto

El propósito de esta investigación es lograr una mejor comprensión de los comportamientos de lecturas compartidas en el ambiente del hogar. Se les pide a los padres que completen una encuesta que tomará aproximadamente 15-30 minutos para completar. Respuestas a los artículos serán coleccionados al devolver un sobre cerrado con la encuesta adjunto con el niño del participante, enviado por correo, dejado en la escuela del niño, o terminado antes o después de la escuela con la ayuda de un estudiante investigador bilingüe si es necesario (cualquier procedimiento que el participante prefiere). Los profesores y la administración van a mantener las encuestas sin abrirlas en un sobre de manila para que sean coleccionadas por la investigadora. Toda su información será guardada en un archivo cerrado en la oficina del investigador Principal, localizado en la Universidad de Rhode Island.

Para entender mejor la relación entre el Ambiente de Alfabetización en la Casa y las medidas de alfabetización temprana vamos a usar los resultados de la evaluación de los niños que fueron medidos anteriormente en el año escolar usando el Phonological Awareness Literacy Screening para Kindergarten (*PALS-K*).

Riesgos o Molestias

Los posibles riesgos o molestias de la investigación son mínimos, aunque es posible que sienta un poco de vergüenza contestando preguntas de asuntos privados.

Beneficios de la Investigación

Aunque no hay directos beneficios de esta investigación, sus respuestas ayudaran aumentar el conocimiento del impacto de la lectura y de las actividades de alfabetización en la casa.

Confidencialidad

Cualquier información colectada durante este proyecto que podrá identificar a usted o a su hijo(a) se mantendrá confidencial. Significado que no daremos a nadie fuera del proyecto información que podrá identificar a usted o a su hijo(a). La información será mantenida en un gabinete cerrado, y será disponible solo para los investigadores. Toda la información que podrá identificar a usted o a su hijo(a) será mantenida por tres años y después será destruido. La información colectada en este proyecto puede ser compartida con los administradores de la escuela, publicado en revistas profesionales o presentados en seminarios profesionales pero ninguna información que podrá identificar a usted o a su hijo(a) será incluido.

Decisión de Renunciar en Cualquier Momento

La decisión de participar en este estudio de investigación depende en usted. Retirándose del estudio no afectará el estatus escolar de su niño(a).

Derechos y Reclamaciones

Participación en este estudio no se espera ser perjudicial para usted. Sin embargo, si este estudio causa cualquier daño, debe llamar Jennifer Dupont a la Universidad de Rhode Island al (401-617-2148). Si tiene otras preocupaciones sobre este estudio o si tiene preguntas sobre sus derechos como un participante de investigación, puede contactar la Vice Presidente de Investigación en la Universidad de Rhode Island, 70 Lower College Road, Suite 2, URI, Kingston, RI, (401) 874-4246.

He leído el formulario de consentimiento y no tengo más preguntas sobre mi participación en este momento. Entiendo que puedo hacer preguntas adicionales en cualquier momento, que mi participación en este proyecto es voluntaria, y que puedo retirarme de este proyecto en cualquier momento.

Si está de acuerdo con participar y permite que los puntajes de la evaluación alfabetización de su hijo(a) sean publicados, por favor complete y firme este formulario, y devuélvelo a la profesora de la clase de su hijo(a) lo antes posible.

Firma del Participante _____

Fecha _____

Nombre Impreso _____

Nombre del Niño _____

Appendix F: Portuguese Informed Consent

FORMULÁRIO DE AUTORIZAÇÃO

Compreensão das Práticas de Alfabetização em Casa

Susan Rattan, PhD, Investigador Principal
Universidade de Rhode Island
Departamento de Psicologia
10 Chafee Road
Kingston, RI 02881
401-617-2148

DESCRIÇÃO DA PESQUISA E OS DIREITOS DOS PARTICIPANTES

Estamos convidando os pais que têm uma criança no jardim-de-infância a participar de um estudo para compreender os comportamentos de alfabetização em ambiente doméstico. A pontuação das crianças nas primeiras avaliações de alfabetização que foram medidos em setembro de 2012 também será utilizada para compreender medidas de alfabetização precoce em relação às práticas de leitura de casa. Se você tiver alguma dúvida ou preocupação, pode contactar o investigador do estudante, Jennifer Dupont, que pode ser alcançado em (401) 617-2148 ou seu principal professor, Susan Rattan, Ph.D., em (401) 874-4246.

Descrição do projeto:

O objetivo deste estudo é obter uma melhor compreensão dos comportamentos de alfabetização em ambiente doméstico. Os pais são convidados a concluir uma pesquisa que tomara cerca de 15-30 minutos para concluir. Respostas aos itens serão coletadas, retornando um envelope selado com a pesquisa que terá o nome da criança participante, enviados ou deixados na escola da criança, ou concluídas antes ou depois da escola com a ajuda de um estudante bilíngue que esta ajudando com esta pesquisa, se for necessário (independentemente do método que prefere o participante). Administração e professores são pedidos para manter os exames fechados num envelope de manilha para ser coletado pelo investigador. Todas as informações serão mantidas em um armário trancado no escritório do investigador principal, localizada na Universidade de Rhode Island.

Os resultados da avaliação das crianças que tenham sido previamente avaliado no início do ano de escolar usando o rastreio de Alfabetização para a consciência fonológica para jardim-de-infância (PALS-K) serão utilizados a fim de compreender melhor a relação entre o início de Alfabetização ambiente e medidas de alfabetização precoce.

Riscos ou Desconforto

Os possíveis riscos ou desconfortos do estudo são mínimos, embora você pode sentir algum constrangimento respondendo perguntas sobre assuntos privados.

Benefícios deste estudo

Embora não haja nenhum benefício direto do estudo, suas respostas ajudarão a aumentar o conhecimento sobre o impacto das atividades de leitura e alfabetização em casa.

Confidencialidade:

Qualquer informação recebida durante este projeto, e que poderia identificar você ou seu filho será mantida confidencialmente. Ou seja, ninguém fora do projeto será dado informação que pudesse identificar você ou seu filho. As informações serão arquivadas em um armário fechado e estarão disponíveis apenas para os investigadores. Todas as informações que poderiam identificar você ou seu filho serão mantidas por três anos e então destruídas. As informações coletadas neste projeto podem ser compartilhadas com administradores escolares, publicadas em jornais profissionais ou apresentadas em conferências profissionais, mas nenhuma informação que poderá identificá-lo ou a sua criança será incluída.

Decisão de parar a qualquer momento:

A decisão de participar neste projeto de investigação é com você. Você não tem que participar e você pode se recusar a responder qualquer pergunta. Retirando-se o estudo não afetará o status do seu filho na escola.

Direitos e Reclamações:

Participação neste estudo não deverá ser prejudicial ou injuriosa a você. No entanto, se este estudo lhe causar qualquer lesão, você deve chamar a Jennifer Dupont em Universidade de Rhode Island no telefone (401-617-2148). Se tiver outras dúvidas sobre este estudo, ou se você tiver dúvidas sobre seus direitos como um participante da pesquisa, pode contactar a Universidade de Rhode Island, Vice-Presidente para a pesquisa, 70 Lower College Road, Suíte 2, URI, Kingston, RI, (401) 874-4246.

Li o termo de consentimento e não tem nenhuma dúvida sobre a minha participação neste projeto neste momento. Eu entendo que pode solicitar quaisquer perguntas adicionais em qualquer momento, também entendo que a minha participação neste projeto é voluntária, e que pode retirar do projeto a qualquer momento.

Se você concordar em participar e permitir que os resultados da avaliação do seu filho ser liberado, por favor de completar e assinar este formulário e devolvê-lo ao professor de sala de aula do seu filho, o mais breve possível

Assinatura do Participante _____

Data _____

Nome Imprimido _____

Nome da Criança _____

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