

2017

Parent-child interaction : how it impacts language and literacy skills

Angie Thurman
University of Northern Iowa

Copyright ©2017 Angie Thurman

Follow this and additional works at: <https://scholarworks.uni.edu/grp>

 Part of the [Curriculum and Instruction Commons](#), [Early Childhood Education Commons](#), and the [Language and Literacy Education Commons](#)

Let us know how access to this document benefits you

Recommended Citation

Thurman, Angie, "Parent-child interaction : how it impacts language and literacy skills" (2017). *Graduate Research Papers*. 617.
<https://scholarworks.uni.edu/grp/617>

This Open Access Graduate Research Paper is brought to you for free and open access by the Graduate College at UNI ScholarWorks. It has been accepted for inclusion in Graduate Research Papers by an authorized administrator of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Parent-child interaction : how it impacts language and literacy skills

Abstract

The purpose of this review is to examine the importance of parent-child interaction in children ages birth through five-years old. The review focuses on how these interactions impact literacy and language skills in young children. Parent interventions and strategies to help children grow in the areas of literacy and language are also highlighted. The conclusion of this review includes recommendations for parents and teachers as well as suggestions for future research.

Parent-Child Interaction: How it Impacts Language and Literacy Skills

A Graduate Research Paper

Submitted to the

Division of Early Childhood Education

Department of Curriculum and Instruction

In Partial Fulfillment

Of the Requirements for the Degree

Master of Arts in Education

UNIVERSITY OF NORTHERN IOWA

By

Angie Thurman

May 6, 2017

This Research Paper by: Angie Thurman

Titled: Parent-Child Interaction: How it Impacts Language and Literacy Skills

has been approved as meeting the research requirement for the
Degree of Master of Arts in Early Childhood Education.

5/10/17
Date Approved

Allison Pattee

Graduate Faculty Reader

5/11/17
Date Approved

Sohyun Meachum

Graduate Faculty Reader

5-10-17
Date Approved

Jill Uhlenberg

Head, Department of Curriculum and Instruction

ABSTRACT

The purpose of this review is to examine the importance of parent-child interaction in children ages birth through five-years old. The review focuses on how these interactions impact literacy and language skills in young children. Parent interventions and strategies to help children grow in the areas of literacy and language are also highlighted. The conclusion of this review includes recommendations for parents and teachers as well as suggestions for future research.

TABLE OF CONTENTS

ABSTRACT.....	iii
INTRODUCTION	1
Description of Topic.....	1
Rationale.....	2
Purpose of the Article.....	3
Terminology.....	4
Research Questions.....	5
LITERATURE REVIEW	6
Literacy.....	6
Language.....	14
Interventions.....	22
CONCLUSIONS AND RECOMENDATIONS.....	29
Identification and Synthesis of Insights and Recommendations	29
Future Research.....	30
Educational Policies.....	31
Teacher and Parent Practices.....	32
REFERENCES	33

CHAPTER 1

Introduction

Babies come into the world ready to learn. Lucky for young children, they do not have to wait until they attend school to begin the learning process. Parents are a child's first teacher. The interactions parents have with their children in the early years build the foundation for learning skills. These interactions can take place through play, reading, and conversations. Children display significant differences in both vocabulary learning and language processing by 18 months, and can display a six-month gap emerging between higher- and lower- SES toddlers by 24 months (Fernald, Marchman, and Weisleder, 2013). These children are already at a disadvantage when they enter preschool. These students may also struggle more with language and literacy skills because they are lacking the support at home.

In this chapter, I mention the importance of parent-child interaction, especially in the first three years of life. I will bring to attention the role that a child's socio-economic status plays in achievement, in particular, in the areas of language and literacy. I then list and define some important terms that will appear in this review. Finally, I state and explain the research questions that will guide this paper.

Description of Topic

Parents have a wide variety of knowledge and beliefs when it comes to interacting with children. For example, "The Kaluli of Papua New Guinea do not consider their children communicative partners early on and do not directly address the children until they are old enough to speak for themselves" (Rowe, et al., 2015, p. 199). This is quite the contrast compared to those who start talking to their baby before they are born.

Children from low-income homes are at a disadvantage when it comes to language and academic skills. A number of studies in this review target children who are from low income families, you will explore this research in the following chapter. More methods have been developed within the research, to help determine delays in early language which also help with long-term skill development (Fernard et al., 2013).

The quantity and the quality of language used when interacting with children impacts language skills (Hirsh-Pasek et al., 2015). This is why it is important to not only talk with children, but to also ask them open ended questions to help with critical thinking skills, vocabulary enrichment, as well as overall language development. In young children or children with low language, the adult can simply narrate what they or the child is doing.

Rodriguez et al. (2009) mentions that daily literacy activities help build the foundation to basic skills and language. These literacy skills can be everyday activities such as reading, telling stories, or talking about letters.

Rationale

As we enter a technology based world, people are communicating differently than the past. There is less face-to-face interaction, and more communication occurs through devices. Many parents are comfortable with this type of communication and do not realize how crucial it is to interact with their children.

Child development experts fear that children may feel they are competing for attention when parents are glued to their gadgets. Smartphone use may even be harming children's social development, with children seeing that their parents think that socializing with a screen as just as good as face-to-face interaction. (Novotney, 2016, p. 52)

Parents may not be aware of how much their interactions with their children can greatly impact their language and literacy skills. The first few years of a child's life are important because they are building the foundation for a broad range of different skills academically, socially, emotionally, and physically. These skills will continue to grow with the child, but a steady foundation is crucial to helping the child flourish. "Children's literacy experiences in the years before they start school are key to their academic success" (Di Santo, Timmons, and Palletier, 2016, p. 146). "If this critical period passes without adequate interaction and opportunity for language development, it will become more challenging to accomplish the milestones as the child develops" (Safwat & Sheikhy, 2014, p. 255).

Parents have the tools they need to help their children grow if they stop and take the time to use them. "Parents and caregivers guide and support their children. They lead them, and they teach them. They do all this by what they say and do" (Goldberg, 2014, p. 11).

This literature review will provide research based knowledge regarding parent-child interaction for researchers, practitioners, policy makers, and parents. This information can be used to improve interactions with children during conversations, reading, and play.

Purpose of Review Results

The purpose of this review is to help parents and educators understand the importance of communicating with children before the child attends school. The reader will gain insight on how these early interactions affect language and literacy skills. If parents are more aware of how they can help their child, then they can make more of a conscious effort when interacting with their child. Educators will benefit from learning how to support families, as well as how to encourage powerful interactions at home. At the age of 3, children who

experience poverty have heard approximately 30 million words less than their peers from higher classes (Hirsh-Pasek et al., 2015). If educators understand how socio-economic status (SES) can impact their students' learning, then they can figure out a way to best meet their individual students' needs.

Terminology

For the purposes and better understanding of this review, I will define the following words:

- Shared reading- “An interactive reading experience that occurs when students join in or share the reading of a book or other text while guided and supported by an adult” (Reading Rockets, 2017, para. 1).
- Dialogic reading- Adult prompts used to increase language with child during a shared reading.
Key steps for adults during dialogic reading include:
 - Prompting the child to say something about the book,
 - Evaluating the child's response,
 - Expanding the child's response by rephrasing and adding information to it, and
 - Repeating the prompt to make sure the child has learned from the expansion. (Whitehurst, 2017, What is dialogic reading? section, para. 2)
 Five prompts used by adults during dialogic reading include:
 - Completion prompts- fill in the blank
 - Recall prompts
 - Open ended prompts
 - Wh- prompts (what, where, when, why, how)
 - Distance prompts (Whitehurst, 2017, How to prompt children section, para. 1)
- Expressive language- Language used to express thoughts (Afasic, 2017).
- Receptive language- Language that is used for understanding (Afasic, 2017).
- Head Start preschool- A preschool program that also provides health, nutrition, and parent involvement services to low-income children and families (Bracken, & Fischel, 2008).

- Parent-child interaction- Parents communicating with children through conversation, playing, reading, etc.
- Socio-economic status- “Measured as a combination of education, income and occupation. Often known as the social standing or class of an individual or group” (American Psychological Association, 2017, para. 1).

Research Questions

1. How can parent-child interactions while reading influence early literacy skills?
2. How does parent-child interaction with children ages birth to five-years-old impact language skills?
3. What interventions can parents implement to achieve greater growth in literacy skills and language development?

CHAPTER 2

Literature Review

Language and literacy go hand in hand. Without being exposed to language, children could have the potential to struggle with creating their own language and understanding letter knowledge, phonological awareness, and concepts about print. The same is true with literacy, without having early literacy experiences, children are not familiar with book handling skills or listening to a story. These students are at a disadvantage compared to peers because they have heard fewer words. The ensuing chapter will address the following research questions:

1. How can parent-child interactions while reading influence early literacy skills?
2. How does parent-child interaction with children ages birth to five-years-old impact language skills?
3. What interventions can parents implement to achieve greater growth in literacy skills and language development?

Literacy

There are a variety of articles that target parent-child interactions while reading. The articles included focus on parents demonstrating shared reading to increase engagement and to model language skills, as opposed to strictly reading the words on the page. The types of parent-child interactions while reading, are also assessed in this section. In addition to shared reading, several researchers looked at how a parent incorporates print and letter knowledge into their child's day. Mothers' beliefs on reading and how this influences a child's vocabulary skills is examined, as well as, expressive language as a result of parent-child

interactions while reading. Lastly, a focus on how to incorporate environmental print into a child's day will be reviewed.

Rodriguez et al. (2009) focused their research on the frequency of literacy activities, the quality of a mother's interactions, and the age appropriateness of learning materials that were used. The study focused on 1046 low income children at the ages of fourteen, twenty-four, and thirty-six months over a several month time period. Mothers were interviewed and children's receptive vocabulary was assessed using the Peabody Picture Vocabulary Test, Third Edition. The children and their mothers were also videotaped playing together. The mother's education impacted the engagement, and approximately half of the dyads demonstrated low quality maternal engagement. Eighty-five percent of the children had learning equipment that was developmentally appropriate, and most of the families reported having access to at least five to ten books at home. Many of the mothers reported that they help work on beginning math and literacy skills at home. The researchers concluded that literacy activities, quality of mother engagement, and learning materials impact language and cognitive development, and that children benefit from early interventions. One limitation of this study is that it focused on mother interactions as opposed to other family interactions. The reports given by the mothers may not be accurate, which could skew some of the data. Also, this report looked at a variety of different variables such as varying levels of interaction during shared book reading, environmental influences, and socioeconomic status, which makes it difficult to pinpoint what directly impacted the results.

Family literacy interactions are a common theme in this literature review. Bracken and Fischel (2008) completed a study which targeted low income families. These researchers compared the types of reading behavior among low income families, as well as the

relationship of family reading and early literacy skills. The study focused on family demographic variables and family reading behavior, and how family reading behavior impacts early literacy skills. Four hundred thirty-three four-year-old children who belonged to a Head Start Program were assessed with four different assessments. *The Get Ready to Read!* screening tool focused on print knowledge, emergent writing skills, rhyming, segmenting, and deletion while the Peabody Picture Vocabulary III concentrated on receptive language. The Family and Child Experiences Survey focused on letter naming, story, and print concepts, and the Woodcock Johnson Revised Test of Achievement centered on symbolic learning. Parents completed a family reading survey which helped researchers conclude that parent reading interest had little relationship with children's literacy skills, except for receptive language. Parents with a higher educational background demonstrated more family reading interest. Older parents demonstrated greater parent-child interaction, as well as more interest in reading. Bracken and Fischel found that the child's age, parent-child interaction, and parent education are most influential in a child's literacy skills. In the *Ready to Read!* screening tool, parent education and the child's age played the largest role in the results. According to the Peabody Picture Vocabulary III assessment, parent education impacted oral language the most. In the letter knowledge assessment, the child's age and family reading behavior varied the results the most. Print concepts varied by parent education, child's age, family size, and parent-child interaction.

Another article that focused on low income children was written by Bojczyk, Davis, and Rana (2016). Researchers looked at how mothers' beliefs and shared reading affected their child's vocabulary skills. They also compared a mother's perceptions of their child's readiness to read and how this influenced her shared reading and interactions. Sixty-two

Head Start children and their mothers read a book together. The mothers then completed an interview which focused on beliefs about shared reading, child readiness to read, and background information. The strategies that mothers used were examined and categorized, and the children's vocabulary was also assessed. Receptive vocabulary was assessed using the Minnesota Picture Naming Task while expressive vocabulary was assessed using the Peabody Picture Vocabulary Test. Researchers concluded that shared reading improved expressive vocabulary, but it did not improve receptive vocabulary. Researchers also found that a mother's beliefs about how reading strategies were used differs based off her belief of her child's readiness to learn.

Hartas (2011) focused on socio-economic status and how this influences the number of parents involved in home learning before school and after starting school. She also examined family income and a mother's education and the role it plays in language and literacy skills. The assessment was done in three sweeps with 15,600 children. The first group worked with children ages nine to eleven months. The children were three-years-old in the second group and five-years-old in the third group. Parents were interviewed when children were three and five-years-old to assess socio-economic status and home learning. At the end of the first year, teachers were given a questionnaire called Foundation Stage Profile, which assesses communication, language, and literacy (CLL) and personal, social, and emotional skills (PSE). Hartas concluded that socio-economic factors and frequency of home learning collected with Foundation Stage Profile were not significant. The frequency of reading impacted CLL more than PSE. Children who were below the poverty line had a lower CLL and PSE. Children who had higher educated mothers had both a higher CLL and PSE score. The mother's income had a moderate effect on CLL and a modest effect on PSE.

The mother's education, on the other hand, had a strong effect on CLL and a moderate effect on PSE. Children's literacy and social outcomes did differ by socio-economic status. The frequency of home learning did not impact language, literacy, and social development. Research was able to conclude that socio-economic status did not impact parental support with learning, but it did have a moderate to-strong impact on language, literacy, and social development.

Lukie, Skwarchuk, LeFevre, and Sowinski (2013) did a study with 170 parents of four and five-year-old children. After the initial interview, four mothers completed a follow-up interview two years later. This study focused on children's interests and how these interests and parent-child interactions affected math and literacy skills. Parents completed a survey that focused on their child's interests, as well as how involved the parent was in math and literacy activities. This study found that children who came from families with higher incomes had more experience with math activities at home, and parents who had girls tended to do more literacy activities at home. Children who came from families who demonstrated more collaborative parent-child interactions had more math and literacy experience and interests. The researchers discovered that there was not a connection between the frequency of math and literacy activities and the type of activities done by the children in the home. Children who were exposed to math and literacy through their topic of interest, could explore those areas more deeply.

Another study focused on the nature and frequency of book talk at home and at school. One hundred thirty families of preschoolers from middle and working classes were assessed in Hindman, Connor, Jewkes, and Morrison's study in 2008. The researchers considered the length of the book, as well as how the book talk effects the child. Children

were assessed two times with the Woodcock Johnson III Achievement Battery using a Letter-Word assessment, which assessed letter identification and decoding words and Picture Vocabulary, which assessed expressive vocabulary. Teachers selected books to read and chose when and how the books were read. The interaction in the classroom was videotaped for researchers to review. The children were also videotaped two times at home. During the assessment at home, parents were given a book to read like they typically would with their child. The parents also completed a questionnaire. Each interaction from the readings was coded and video tapes were reviewed by the team and scored. A contextualized code was demonstrated if the parent used a question or comment, connected to names or sounds of letters or words on the page, while a decontextualized code was used when a parent referred to letters and sounds that were not present on the page. Contextualized meaning focused more on labeling pictures on the page, while decontextualized meaning focused on conversation that tied in connections to the story. The most common type of talk used by parents was contextualized code. Few parents used decontextualized code and as a result, it was eliminated from the analyses. Out of the conversation that took place while reading, 85% was meaning based, as opposed to code based. The children used more contextualized talk than decontextualized talk, as well as children who had strong fall scores, also demonstrated strong spring scores. The researchers found that teachers labeling letters, had no impact on children's outcomes. Interestingly, children whose parents mostly used labeling and descriptive talk, did not demonstrate as much growth, in comparison to those who used this kind of talk less often. When children demonstrated decontextualized talk, there was a positive effect. Researchers discovered that parents mostly used labeling and descriptive talk, while teachers mostly used higher order recall, predicting, and inference-making.

Mol, Bus, de Jong, and Smeets (2008) took a different approach by completing a meta-analysis which focused on sixteen studies. Eight of the studies focused on receptive and expressive vocabulary, while seven studies focused on receptive vocabulary only, and one focused on expressive vocabulary only. These studies consisted of 626 parent-child dyads and the children ranged from 27.8-70.2 months. There were no children with mental, physical, or sensory handicaps in the study. Through these studies, the researchers looked at whether dialogic reading effects parent-child reading, as well as how dialogic reading impacts expressive and receptive language, and how this differs according to the age of starting the intervention. Researchers compared the outcomes of children who are at risk or have language impairments with typically developing children. Expressive vocabulary was assessed with the Expressive One- Word Picture Vocabulary Test, and receptive vocabulary was assessed with the Peabody Picture Vocabulary Test, Third Edition, and Bracken Basic Concept Scale. Interactions were videotaped to assess the length of utterances. Receptive vocabulary had consistent results between the different groups, while preschool students benefited significantly more from dialogic reading intervention than kindergarten children. Dialogic reading also had moderate results for children who were not at risk, and had a small effect for those at risk. By increasing dialogic reading, the effects of book reading were enhanced. Researchers concluded that not all children need dialogic reading to benefit. Parents should, however, use open-ended questions while reading with children.

Many of the studies in this review focus on how parents interact with their child while reading, but Di Santo and the colleagues (2016) focused their study on how mothers use the environment to teach literacy and program activities used at home. This study was done with twelve homeless women living in a shelter and their preschool children. A six-week family

literacy program was provided for the mothers. Mothers were interviewed before and after the program. Each session was ninety minutes long and had three parts: facilitator meeting, mother-child interaction, and time for child to play, while the mother learned strategies and debriefed. Mothers were given the opportunity to try the new strategies with their children. Each week focused on a different literacy topic, and the topics discussed included: environmental print, program materials, oral storytelling, print awareness, and the role of play. The study found that educating parents on literacy activities and teaching them how to incorporate them into their daily lives, is beneficial to literacy skills. One topic that was a focus during the program was using environmental print. "Environmental print was defined as the different forms of print (e.g. signs, signals, symbols, logos) that are found in both indoor and outdoor environments and which provide us with information" (Di Santo et al., 2016, p. 156). Most of the mothers reported that they had not used environmental print as a literacy tool with their child in the past. Mothers reported that after implementing this strategy, their child took more of an interest in the print around them, as well as expressed a greater interest in books. Mothers were provided with books that their children enjoyed reading repeatedly. The research found that telling oral stories can help with social skill development. The mothers reported that after the program, they now incorporate more print awareness (letter naming and sounds) into their interactions with their children. Mothers were provided with new materials and strategies to play with their children. The research found that it was beneficial to mothers and their children, to provide literacy strategies and activities that could be done anywhere and were not only easily transported, but also inexpensive or free in most cases.

Many of these studies looked at socioeconomic status and found that children who were from a lower socioeconomic status were at a disadvantage in relationship to literacy skills. Mothers who had a lower education, often did not know appropriate activities and strategies to use prior to the studies. Researchers found that parent education affected oral language (Rodriguez et al., 2009), and shared reading can improve a child's expressive language (Bracken and Fischel, 2008). Parent education and parent-child interaction, impacted children's understanding of letter knowledge and print concepts (Bojczyk, Davis, & Rana 2016). Children who had more literacy experiences in the early years could explore literacy more deeply (Lukie, Skwarchuk, LeFevre, & Sowinski, 2013). Researchers found that aside from just reading the word, most parents just label the pictures in books (Hindman, Connor, Jewkes, & Morrison, 2008). The frequency of reading impacts literacy skills (Hartas, 2011). Literacy skills can be woven into everyday life through oral stories, environmental print, print awareness, and play (Di Santo et al., 2016).

Language

Parent-child interactions play a large role in language development. The types of interactions parents had with their children were evaluated in several of the studies in this section. One article focused on the home language environment and how this impacted language development (Cline & Edwards, 2013). Another study not only looked at home environment, but also adult word count, conversational turns, television, sociodemographic variables, parent education, and income and how these factors influenced language development (Zimmerman et al., 2009). Other factors that are investigated in this section are parent knowledge of language development and intervention, parent beliefs in regard to literacy, quality, and frequency of interactions (Safwat & Sheikehany, 2014). This section

highlights how vocabulary learning and language processing efficiency can vary (Fernald et al., 2013). In addition to quality, quantity of interactions is also a feature in this section (Hirsh-Pasek et al., 2015). One article focuses on how parent knowledge of development influences literacy and language skills (Rowe et al., 2016).

Cline and Edwards (2013) worked with eighty-one parents and children from Head Start to investigate the relationship between reading qualities and child learning. The researchers assessed in both English and Spanish to see if language made a difference between these qualities. Parents were interviewed for this study, and children's cognitive and language skills were assessed. Parents and children were videotaped doing tasks and reading a book together, and researchers coded the videos for instructional and emotional quality. The parent utterances were coded as questions or requests, feedback, book-related conversation, reading, or other. Emotional quality was coded as reading expression, reader sensitivity to child's engagement, child enjoyment and involvement, parent's enjoyment of child, parent's acceptance of child, and the amount of positive and negative statements. Cognitive skills such as language, emergent literacy, early mathematics, social development, and motor skills, were assessed using Bayley Scales of Infant Development Second Edition, and language development was assessed using the Preschool Language Scale- Fourth Edition in both English and Spanish, depending on the home language. Children were assessed on how much they understood in the language as well as how they communicated. There was a positive trend between extra-textual talk and emotional quality in English speaking children, but a weaker trend for Spanish speaking children. English speaking children demonstrated higher cognitive scores when there was higher emotional quality and more extra-textual talk and low emotional quality lead to less extra-textual talk. When Spanish speaking dyads

demonstrated a high emotional quality, they had less extra textual talk. Low emotional quality combined with extra-textual talk had no impact on cognitive scores, but extra-textual talk was impacted by emotional quality. There was no correlation with high emotional quality and Expressive Communication scores. On the other hand, low emotional quality did make for less extratextual talk and a higher Expressive Communication score.

Another study by Fernald and the colleagues (2013) focused on vocabulary learning and how language processing efficiency can vary. They also looked at how socio-economic status can affect early language development. The researchers assessed forty-eight English learning children who were typical developing and monolingual. Children were assessed at eighteen and twenty-four months by using Looking-While-Listening (LWL) test. For this test, pictures were presented four times as the target picture and four times as the distractor. These assessments were video recorded for later visual coding. At twenty-four months, children heard sentences that contained familiar words. Pictures were presented two times as the target and two times as the distractor, and the researchers did visual coding by looking at where the child was looking. Accuracy was assessed according to how long the child looked at the target and distractor (300-1800 milliseconds). The reaction time was only taken into consideration when the child looked at the distractor first and then the target word within 300-1800 milliseconds. If the time was longer or shorter, then it was excluded. The mean accuracy and the mean reaction time created the processing efficiency. Vocabulary and language processing efficiency was noticeable at eighteen months between higher and lower socio-economic status. At twenty-four months, there was already a six-month gap in processing skills that are crucial to language development between socio-economic status groups. The Hollingshead Four Factor Index of Socioeconomic Status (HI) was used to

assess socioeconomic status. Children who were eighteen months old and had a high HI score demonstrated advanced vocabulary more accurately and were faster in LWL. The twenty-four-month-olds spent more time looking at the correct picture than the eighteen-month-olds. The children with a higher socio-economic status had faster reaction times. The children who were faster and more accurate could produce more words.

Hirsh-Pasek et al. (2015) focused on mother-child interactions and how the quality and quantity affect communication. Children with a variety of language levels were compared during mother-child interactions. Researchers focused on quality of communication foundation, quantity of language input, and both to determine what determined language outcome. Sensitive parenting was also assessed. Researchers worked with sixty low income children who had a mix of expressive language scores and were selected from the archived NIHD Study of Early Child Care and Youth Development. The researchers examined videos of parent-child interactions at twenty-four months. Children's expressive language was assessed using Reynell Developmental Language Scales at thirty-six months. Researchers looked at the sum of sensitivity and responsiveness and used the scores from the Home Observation for Measurement of the Environment. Mothers were given three boxes with different materials in them and were told to interact with their child using the items from the boxes. Researchers recorded the parent-child interactions and watched the videos three times, noting joint engagement, sustained interactions, routines, and rituals. Hirsh-Pasek et al. looked at words per minute used by the mother to assess quantity of language input. The top language learners at thirty-six months also had significantly higher scores at twenty-four months in all three categories. Sensitive parenting and maternal words per minute demonstrated the same differences as quality ratings. The researchers

found that the maternal words per minute did not prove to be significant in the data. Quality rating at twenty-four months determined expressive language at thirty-six months. Both quality of interactions and maternal words per minute impacted language success, but quality of interactions was more important.

Rowe and the colleagues (2016) researched how a mother's knowledge of their child's development at nine months varies based off ethnicity and education. Researchers wanted to know what sources of information mothers of various education levels and ethnicities used to educate themselves on child development. They were interested in whether there was a relationship between race and ethnicity and parenting knowledge. The researchers considered the mothers' knowledge of development and how it impacts language and literacy skills. This study was done with 6,150 mothers and children who were White, Black, and Latino. The children were assessed at nine, twenty-four, forty-eight months, and at the entry of kindergarten. Parent interviews were done at each wave, and the children were assessed in the areas of motor and cognitive development at each wave. At the third wave, the children were assessed in the area of language. A portion of the Knowledge of Child Development Inventory (KIDI) was used to assess the mothers' knowledge of development. Researchers found that the higher the KIDI scores, the higher the language and literacy skills were for the different racial groups. The mother's education and income also had positive results on the scores. The female children tended to have higher scores in this research.

Safwat and Sheikehany (2014) took a different look at language development with young children. These two researchers worked with one hundred parents and children ages twenty-seven to forty-nine months. These children had delayed language development, so

the researchers looked at language, socio-economic status, parent knowledge of language development and intervention, and the sufficiency of parent-child interactions. Parents filled out a questionnaire that focused on parent communicative behavior and basic parent behavior. The questionnaire also asked parents about their beliefs of what causes delayed language development, as well as how to manage it. The quality of interactions was assessed by asking parents about the strategies that they use with their children. Frequency of interactions was assessed with a three-point scale, and the socio-economic status was rated with a scale. The research found that the majority of parents were knowledgeable about language delay, but they did not properly help their child with delays. In fact, 93% of parents were insufficient with their interactions. Interestingly, 78% of parents knew information about language development and intervention. Socio-economic status impacted a child's language, however parent occupation and education had more of an impact than socio-economic status. Parents were given ideas on what they could do with their child to help them and were asked if they would be able to implement these strategies. The researchers found that parent interactions impacted language, but they were unsure if quality or quantity effected language development. The interactions that the parents reported doing the most with their children were asking questions, correcting, and giving instructions.

Another study conducted by Zimmerman et al. (2009) looked at how much adult-child interaction was happening with infants and toddlers, as well as how much television viewing was taking place. The study also investigated the home language environment and child language development. The participants in this study were 275 families with children ages two to forty-eight months. A longitudinal study that took place for eighteen months was done with seventy-one of the families. In this study, children wore a recordable device called

a Language Environmental Analysis (LENA). This device collected data for a twelve-hour period one day a month for six months, and eighteen months for the longitudinal study. The software detected adult language and television, but it was not able to identify for sure if the speech was towards the child or just near the child. It was, however, able to keep track of conversational turns. The Preschool Language Scale Fourth Edition was used to analyze the data. This assessment looked at adult word count, conversational turns, television, sociodemographic variables, parent education, and income. Human coders tracked seventy, twelve hour sessions, to test the fidelity of the software. The study discovered that the average child hears 13,000 words from adults each day, and on average, the average child experiences 400 adult-child conversational turns a day. For each hour of television that a child watches, there is a 2.68 decrease in language score. On the other hand, each 100th conversational turn per day increases the language score by 1.92. Conversational turns and adult word count result in a positive association of language development. Television watching results in a significant negative association of language development. As a result, the researchers could conclude that television is not effective for language. The study suggests that adults should read to child to incorporate more language. They also found that dialogic reading is the most beneficial way to enhance reading. Parents encouraging children talking, is just as important as children hearing adult language.

Researchers Liebeskind, Piotrowski, Lapierre, and Linbarger (2013) did a study with 500 parents of eight to thirty-six-month-olds who were chosen at random. The study also looked at how media and parent-interaction can impact language skills. Parents completed a survey related to child's media use, vocabulary knowledge, and parent-child interactions. There were several different child and family variables in this study. The researchers pulled

a list of activities for the parent to respond to from the Head Start Family and Child Experiences Survey and the Stony Brook Family Reading Survey. The vocabulary knowledge assessment came from MacArthur-Bates Communicative Development Inventories. Research found that the number of books and radio were indirectly linked to language production due to increased parent-child interaction. An increase in children books leads to an increase in parent-child interaction and language. "The only variable that was significantly related to language production was parent-child interactions" (Liebeskind et al., 2013, p. 19). Parents can help children improve language by teaching new vocabulary, letters, and words. They can also point out written materials in everyday activities.

This section highlighted the importance of parent-child interaction on language skills. Research found that low emotional quality made for less extratextual talk and higher expressive communication (Cline & Edwards, 2013) and how conversational turns and adult interaction has a positive impact on language (Zimmerman et al., 2009). The majority of parents are knowledgeable about language delay, but they do not always know how to best help their children with this problem (Safwat & Sheikehany, 2014). The research found that there was a gap in processing skills that are crucial to language development between socio-economic status groups (Fernald et al., 2013) and that parent-child interaction is increased from the number of books in a house (Liebeskind et al., 2013). Quality and number of words per minute used by a parent can determine the amount of expressive language a child uses (Hirsh-Pasek et al., 2015). Researchers found that parent education affected language development, and that parents who demonstrated higher knowledge of development resulted in their children having higher language and literacy skills (Rowe et al., 2016).

Interventions

This section touches on various interventions that were done with parents to assist in parent-child interactions. These interventions focused on helping children to grow in the areas of literacy and language. One study trained parents in dialogic reading and elaborative reminiscing and compared how this influenced language and literacy skills (Reese, Leyva, Sparks, and Grolnick, 2010). Another study initiated a Play and Learn Strategy intervention that focused on helping mothers with their interactions while reading (Landry et al., 2012). Yet another intervention that was assessed was Parent-Child Interaction Therapy (PCIT) which looked at children's mean utterance and the ratio of time of child to parent speech that was found after therapy (Falkus et al., 2016). One study compared two different interventions. In one of the interventions, parents worked with a specialist while the other intervention consisted of using mostly reading materials to help improve parent-child interactions (Mendelsohn et al., 2011). The final intervention was called Getting Ready Intervention. This intervention was different because it had a teacher component (Sheridan, Knoche, Kupzyk, Edwards, & Marvin, 2011).

The following study focused on low-income families and their parent-child interaction carried out by Reese et al. (2010). The researchers worked with forty-one Head Start families, specifically mothers. These families were divided into three different groups including a control group, a dialogic reading group, and an elaborative reminiscing group. The study compared the effects of training low-income mothers in dialogic reading in comparison to elaborative reminiscing and how this impacted oral language, as well as beginning literacy skills. It also looked at the correlation between a child's books skills and their interactions with their mothers about other books and past events, also known as

elaborative reminiscing. Researchers wanted to know if elaborative reminiscing had a connection with children's print concepts. Children had a pretest and posttest that assessed vocabulary, narrative, and print skills. Oral language was assessed through both expressive and receptive vocabulary tests, and narrative skills were assessed through story comprehension and story retelling tasks. Print skills were assessed through a test of print concepts that was given to the children at the beginning and end of preschool. At random, mothers received training in dialogic reading or elaborative reminiscing, and some mothers did not receive training. Parents were interviewed and asked to fill out a questionnaire. The Peabody Picture Vocabulary Test III was given to assess receptive vocabulary by pointing to a specific picture out of a field of four pictures. The children were also given the Expressive Vocabulary Test and asked to name the picture. For the narrative test, after listening to a story, children were asked comprehension questions and asked to retell the story. The children were also given a Concepts About Print Test. The researchers scored the tests and transcribed and coded the retelling. The pretest did not demonstrate significant differences between the three groups. Maternal education did impact both the narrative quality and the children's print skills. There was a correlation between expressive vocabulary during the pre-test with the results from the post-test. There was also a connection with print skills between the two tests. The researchers found that after mothers received training, there still was no difference in a child's expressive vocabulary and story recall. Children whose mothers identified themselves as White could recall significantly more from the stories. Children whose mothers received elaborative reminiscing training had a higher narrative quality score than those whose mother received dialogic training. While children whose mothers received elaborative reminiscing training had a significant positive effect on

narrative quality, the training had a marginal effect on story comprehension and no effect on expressive vocabulary, story recall, or print skills. Overall there was not a positive effect from dialogic reading training in expressive vocabulary, narrative skills, or print skills.

Landry et al. (2012) also researched low income mother-child dyads to see how maternal interaction while reading impacts child language and engagement. The researchers looked at the child's response to maternal requests and initiations. Many of the children involved had a very low birth weight and high biological risks, however typically developing children were also included in the study. The researchers started the study with 222 mother-child dyads whose children averaged 6.2 months in a Play and Learning Strategies I (PALS I) test. The PALS II study was done with 166 participants from the first test, and the children ranged from twenty-four to twenty-eight months at the time of the test. The participants were divided into four study groups randomly. Mothers were assigned to PALS I or a control group. The control group included developmental assessments and participants received information on how their child's next stage of development would look, but not information on how to help this development. This session is referred to as Developmental Assessment Sessions (DAS). The four study groups included: PALS I-PALS II, PALS I- DAS II, DAS I-PALS II, DAS I- DAS II. The PALS II and DAS II included eleven weekly 1.5-hour home visits and developmentally appropriate materials were provided. Assessments included a pre-test, posttest, and follow up. The PALS groups included videotaping and watching mother-child interactions and provided strategies to target behavior. The mothers watched videos demonstrating positive parent-child interactions, including shared book reading. Parents in DAS groups discussed new child skills. The facilitators would screen the skills, answer questions, and provide feedback, but they did not answer questions related to helping with

development. PALS II and DAS II participants received the same handout that described the development of the child. Mothers who participated in both the PALS I and II gave the highest level of praise to their children. They also had higher levels of strategies to promote child talk, and they asked more questions. There was a greater effect of PALS II for very low birth weight children compared to full term babies. PALS I- PALS II demonstrated a greater increase from the post-follow up assessment in verbal support. Both PALS I and II had greater gains than DAS I and PALS II. In fact, the greatest gains were seen with the PALS intervention, particularly PALS I and PALS II. Children who participated in PALS II had better responsiveness than DAS II. Children who were born with very low birth weight and full term benefited from the intervention.

Falkus et al. (2016) looked at the effects of Parent-child Interaction Therapy (PCIT) by a clinician in a clinic. Researchers looked at changes in the parent rating scale, as well as children's mean utterance. They also examined the ratio of time of child to parent speech that was found after therapy. The researchers worked with eighteen parent and child groups. The children ranged in age from 1:09-3:06 years, and none of the children had previous therapy. The children were all assessed on the Pre-School Language Scale (PLS4), and all the children were below the mean of their age. The clinicians decided if the PCIT was appropriate. Clinicians spent four weeks doing clinical therapy and five weeks working with the parent on what to do at home. There was an assessment appointment at the tenth week. The parent and child were recorded and the parent and therapist then watched and discussed the interactions. Parents completed a parent rating scale that touched on different strategies to use while interacting. The parent then chose a strategy which they did not have a lot of experience with and worked on incorporating it at home three-five times a week and another

video was made and discussed. Parents used three-four new strategies. Children were assessed with the PLS4 through a video and their utterances were calculated as well. Therapists analyzed parent rating score, child's mean length of utterances, and ratio of child to parent speech. The children were comparable in pre-therapy tests, and there was a significant difference in post therapies. Parents' language was reduced in post therapy and children increased their spoken time.

Mendelsohn et al. (2011) looked at the effects of primary care intervention on parent-child interactions in 410 low socioeconomic families. The children in the study began as newborns. There was a control group and two intervention groups in the study which took place from birth to three-years-old. The intervention groups were the Video Intervention Project (VIP) and the Building Blocks intervention (BB). In the VIP, mothers and their children were videotaped. The mother then watches the tape with the child development specialist (CDS) and the CDS gives positive feedback and suggestions. Families were also given learning materials to use during interactions with their child and pamphlets with suggestions of ways to enhance interactions. In the BB intervention, parents receive a monthly newsletter, learning materials, and questionnaires. In the control group, the families receive typical pediatric care. An assessment called StimQ was used in the form of an interview to evaluate interactions at home. Mothers also used a reading diary to recap on daily reading activities. Both the VIP and BB groups demonstrated greater parent-child interaction than the control group.

Sheridan et al. (2011) assessed the effect of Getting Ready Intervention on readiness associated with language and literacy skills with twenty-nine inclusive Head Start classrooms. The study also evaluated if family or child variables impacted the Getting Ready

intervention and language and literacy skills. The participants in this study were 217 children who ranged in age from 35.94-52.63 months. The majority of the families participated in the study for four years. Each academic year, four one-hour home visits were held. Conferences and monthly family activities also took place. The Teacher Rating of Oral Language and Literacy and the Preschool Language Scale- Fourth Edition (PLS-4) assessed the intervention and how it affected language and literacy skills through teacher reports and child assessments. Teachers completed a four-point Likert scale related to language and literacy skills. The Teacher Rating of Oral Language and Literacy assessed language development while the PLS-4 assessed auditory comprehension and expressive communication. Parents filled out a questionnaire and were videotaped interacting with their child. The Getting Ready intervention helped to focus on the child's strengths. Teachers attended training sessions for the intervention.

Getting Ready approach provided a structure for teachers to (a) focus the parent's attention on their child's strengths, (b) share and discuss observations about their child, (c) discuss developmental expectations and goals, (d) provide developmental information, (e) make suggestions, and (f) brainstorm collaboratively with parents around issues related to their child's social, cognitive, or language development and learning. (Sheridan et al., 2011, p. 369)

Researchers discovered that the treatment group had higher expressive communication than the control group.

Researchers are recognizing that there are discrepancies among children in the areas of literacy and language. The studies in this section focused on how to help parents interact with their children to improve these skills. Researchers discovered that elaborative

reminiscing training resulted in higher narrative skills than dialogic reading (Reese et al., 2010) and that child talk and questions were improved through the Play and Learning Strategies intervention (Landry et al., 2012). Parent-child interaction therapy helped to reduce parent language and increase child spoken time (Falkus et al., 2016). Both the Video Intervention Project and Building Blocks interventions were beneficial to improving parent-child interaction (Mendelsohn et al., 2011) and the Getting Ready Intervention resulted in higher expressive communication than the control group (Sheridan et al., 2011).

This chapter emphasized the importance of parent-child interactions and how these interactions play an important role in language and literacy skills in children. Several studies noted that socioeconomic status and parent education does impact these skills, but that there are ways that all parents can help their child grow in language and literacy. An important aspect to remember is that quality interactions are key to improving skills. Children benefit from shared reading because they not only hear more words, but they also think more deeply than simply listening to the words on the page. Shared reading helps with expressive vocabulary and can also help with print concepts and letter knowledge. Language skills can be improved through reading with children and incorporating conversational turn taking. The next chapter will provide conclusions and recommendations on parent-child interactions.

CHAPTER 3

Conclusion and Recommendations

Identification and Synthesis of Insights and Recommendations

Increased literacy skills from parent-child interaction suggests that parents need to read with their children. Parents can increase these skills through shared reading, shared writing, and storytelling. These reading experiences can not only help children with book handling skills, but also with print concepts (Bracken and Fischel, 2008). While reading, parents can stray away from just reading the words on the page, and should ask open ended questions and help children to make connections with the story. This can be done even before the child is able to speak words. These strategies can help with receptive and expressive vocabulary (Bojczyk, et al., 2016). Pointing out experiences that the child has had in their life, that are similar to what is happening in the story, will help the child to make connections with stories. Additional resources found at libraries can be another great tool for families. Not only do libraries have a wide variety of books to check out, but many also offer story time and other activities for families to do together.

Parents can use environmental print, which is identified as the print they see in their everyday lives (Di Santo et al., 2016). For instance, while shopping, they can point out letters that they see on the products or signs. Parents can model writing while making a grocery list, and have their child help them mark off the items on the list as they add them to the cart.

The research found an increase in language skills from parent-child interaction, suggesting that parents model language with their children. They enhance this skill through taking turns in conversation while providing children the opportunity express themselves.

(Zimmerman et al., 2009). Even before children have a lot of language, parents can narrate their activities, as well as describing aloud what their child is doing. Adding in describing words such as colors, shapes, sizes, etc. enhances the language. The parent may feel like a sport announcer having a one-sided conversation, but the child benefits from hearing the extra language. Parents can share personal stories of events from their life with their child. Children especially love to hear stories that take place when their parents were kids. Research has found that the frequency of interaction has a significant impact on language and literacy skills, for this reason the more common these interactions occur in the home, the greater the opportunity the child has to build their experiences with language. (Hartas, 2011).

Future Research

Many of the studies focused on a few different literacy strategies such as shared reading, but they briefly skimmed over parent-child interactions with various forms of technology. Future research is needed on parent-child interactions with and without different types of media, and how this effects language production, especially considering technology is a prevalent part in many lives. Literacy was a main skill area in several of the studies, but other areas of research that could be explored are how parents incorporate math activities with their child and how a child's communication foundation can impact academic skills in other areas besides literacy, such as math and science.

Many of the studies focused on mother-child interactions while reading, during conversations, and through play, but they did not look at other adult-child relationships. As a result, some of the research could be overlooking the impact that other adults in a child's life may have on their literacy and language skills.

Low-income families were the target for many of the studies, but more research should be done on families from a variety of different backgrounds to evaluate what strategies are beneficial regardless of class. Researchers should find ways to narrow the gap between children from low and high socio-economic classes through providing long-term interventions.

Educational Policies

Currently, many schools are recognizing the importance of parent-child interaction by providing more opportunities for parents and guardians to get involved with their child's education. Schools should continue providing more information about what can be done at home, as well as utilizing communication between teachers and parents. Technology has allowed Facebook and email to be major forms of communication, however reaching out in multiple ways continues to connect all families. These methods are helpful for when the child is in school, but caregivers need to become more aware of their role in developing a child's language development, especially before their child starts school. While many families take their children to several wellness checkups in their child's first year of life, I recommend that doctor offices provide information to these parents on how they can increase interactions with their child and strategies to enrich those interactions. They can provide pamphlets suggesting strategies that were found helpful such as, shared reading. Including this information along with additional resources where parents can get more information on how to improve their child's development, will help promote positive parent child interactions.

Teacher and Parent Practices

This review has provided valuable information that will not only help parents, but will also give teachers greater data driven information to share with students' parents. It has hopefully brought awareness to the amount of adult-child interaction that is used by verbally communicating with children at home and school through books, conversations, and play. Teachers and parents should challenge themselves to incorporate language wherever and whenever possible. They should think of different ways to expand conversations, as well as new phrases to use in conversation. While reading, they should take time to incorporate more shared reading, instead of just reading the words. Adults should try to include more open ended questions than in the past, while reading and conversing with children.

Teachers should consider that children's language exposure can vary, and should work to enhance every opportunity possible. They can model this language for parents and give them suggestions of ways that they can increase language at home. One suggestion for teachers is to provide parents with ideas on how they can increase interaction with their child at home. These can be simple ideas such as asking questions while reading or looking for words while at the grocery store. These cues would help parents gain useful strategies that could help their children grow in a variety of different areas.

References

- American Psychological Association. (2017). Education and socioeconomic status. *American Psychological Association*. Retrieved from <http://www.apa.org/pi/ses/resources/publications/education.aspx>
- Afasic. (2017). More about speech, language, and communication. *Afasic*. Retrieved from <http://www.afasic.org.uk/about-talking/more-about-speech-language-and-communication/>
- Bojczyk, K. E., Davis, A. E., & Rana, V. (2016). Mother-child interaction quality in shared book reading: Relation to child vocabulary and readiness to read. *Early Childhood Research Quarterly, 36*, 404-414. Retrieved from <http://dx.doi.org.proxy.lib.uni.edu/10.1016/j.ecresq.2016.01.006>
- Bracken, S. S., & Fischel, J. E. (2008). Family reading behavior and early literacy skills in preschool children from low-income backgrounds. *Early Education and Development, (19)*1, 45-67. doi: 10.1080/10409280701838835
- Cline, K. D., & Edwards, C. P. (2013). The instructional and emotional quality of parent-child book reading and Early Head Start children's learning outcomes. *Early Education and Development, 24*(3), 1214-1231. doi: 10.1080/10409289.2012.697431
- Di Santo, A., Timmons, K., & Pelletie, J. (2016). "Mommy that's the exit": Empowering homeless mothers to support their children's daily literacy experiences. *Journal of Early Childhood Literacy, 16*(2), 145-170. doi: 10.1177/1468798415577872
- Falkus, G., Tilley, C., Thomas, C., Hockey, H., Kennedy, A., Arnold, T., Thorburn, B., Jones, K., Patel, B., Pimenta, C., Shah, R., Tweedie, F., O'Brien, F., Leahy, R., & Pring, T. (2016). Assessing the effectiveness of parent-child interaction therapy with

language delayed children: A clinical investigation. *Child Language Teaching and Therapy*, 32(1), 7-17. doi: 10.1177/0265659015574918

Fernald, A., Marchman, V. A., & Weisleder, A. (2013). SES differences in language processing skill and vocabulary are evident at 18 months. *Dev Sci.*, 16(2), 234-248. doi: 10.1111/desc.12019

Goldberg, S. (2014). *Constructive Parenting*. Retrieved from <https://www.education.com/reference/article/parent-child-interaction/>

Hartas, D. (2011). Families' social backgrounds matter: socio-economic factors, home learning and young children's language, literacy, and social outcomes. *British Educational Research Journal*, 37(6), 893-914. doi: 10.1080/01411926.2010.506945

Hindman, A. H., Connor, C. M., Jewkes, A. M., & Morrison, F. J. (2008). Untangling the effects of shared book reading: Multiple factors and their associations with preschool literacy outcomes. *Early Childhood Research Quarterly*, 23, 330-350. doi: 10.1016/j.ecresq.2008.01.005

Hirsh-Pasek, K., Adamson, L. B., Bakeman, R., Owen, M. T., Golinkoff, R. M., Pace, A., Yust, P. K. S., & Suma, K. (2015). The contribution of early communication quality to low-income children's language success. *Psychological Science*, 26(7), 1071-1083. doi: 10.1177/0956797615581493

Landry, S. H., Smith, K. E., Swank, P. R., Zucker, T., Crawford, A. D., & Solari, E. F. (2012). The effects of a responsive parenting intervention on parent-child interactions during shared book reading. *Developmental Psychology*, 48(4), 969-986. doi:10.1037/a0026400

- Liebeskind, K. G., Piotrowski, J. T., Lapierre, M. A., & Linebarger, D. L. (2014). The home literacy environment: Exploring how media and parent-child interactions are associated with children's language production. *Journal of Early Childhood Literacy, 14*(4), 482-509. doi: 10.1177/1468798413512850
- Lukie, I. K., Skwarchuk, S. L., LeFevre, J., & Sowinski, C. (2014). The role of child interests and collaborative parent-child interactions in fostering numeracy and literacy development in Canadian homes. *Early Childhood Education Journal, 42*, 251-259. doi: 10.1007/s10643-013-0604-7
- Mendelsohn, A. L., Huberman, H. S., Berkule, S. B., Brockmeyer, C. A., Morrow, L. M., & Dreyer, B. P. (2011). Primary care strategies for promoting parent-child interactions and school readiness in at-risk families: The Bellevue project for early language, literacy, and education success. *Archives of Pediatrics and Adolescent Medicine, 165*(1), 33-41. doi: 10.1001/archpediatrics.2010.254
- Mol, S. E. Bus, A. G., de Jong, M. T., Smeets, D. J. H. (2008). Added value of dialogic parent-child book readings: A meta-analysis. *Early Education and Development, 19*(1), 7-26. doi: 10.1080/10409280701838603
- Novotney, A. (2016). Smartphone=not-so-smart parenting? *American Psychological Association, 47*(2), 52. Retrieved from <http://www.apa.org/monitor/2016/02/smartphone.aspx>
- Reading Rockets. (2017). Shared reading. *Reading Rockets*. Retrieved from http://www.readingrockets.org/strategies/shared_reading

- Reese, E., Leyva, D., Sparks, A., & Grolnick, W. (2010). Maternal elaborative reminiscing increases low-income children's narrative skills relative to dialogic reading. *Early Education and Development, 21*(3), 318-342. doi: 10.1080/10409289.2010.481552
- Rodriguez, E. T., Tamis-LeMonda, C. S., Spellmann, M. E., Pan, B. A., Raikes, H., Lugo-Gil, J., & Luze, G. (2009). The formative role of home literacy experiences across the first three years of life in children from low-income families. *Journal of Applied Developmental Psychology, 30*, 677-694. doi: 10.1016/j.appdev.2009.01.003
- Rowe, M. L., Denmark, N., Harden, B. J., & Stapleton, L. M. (2016). The role of parent education and parenting knowledge in children's language and literacy skills among White, Black, and Latino families. *Infant and Child Development, 25*, 198-220. doi: 10.1002/icd.1924
- Safwat, R., & Sheikhy, A. (2014). Effect of parent interaction on language development in children. *The Egyptian Journal of Otolaryngology, 30*(3), 55-65
- Sheridan, S. M., Knoche, L. L., Kupzyk, K. A., Edwards, C. P., & Marvin, C. A. (2011). A randomized trial examining the effects of parent engagement on early language and literacy: The Getting Ready intervention. *Journal of School Psychology, 49*, 361-383. doi: 10.1016/j.jsp.2011.03.001
- Whitehurst, G. J. (2017). Dialogic reading: An effective way to read to preschoolers. *Reading Rockets*. Retrieved from <http://www.readingrockets.org/article/dialogic-reading-effective-way-read-preschoolers>
- Zimmerman, F. J., Gilkerson, J., Richards, J. A., Christakis, D. A., Xu, D., Gray, S., & Yapanel, U. (2009). Teaching by listening: The importance of adult-child interactions. *Pediatrics, 124*(1), 342-349. doi: 10.1542/peds.2008-2267