2007

Parenting practices and language development in low SES Spanish-speaking families

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DOI: <https://doi.org/10.31979/etd.bcsu-2ztb>
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PARENTING PRACTICES AND LANGUAGE DEVELOPMENT IN LOW SES
SPANISH-SPEAKING FAMILIES

A Thesis

Presented to

The Faculty of the Department of Communicative Disorders and Sciences

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Julissa C. Villanueva

December 2007

UMI Number: 1452055

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ABSTRACT

PARENTING PRACTICES AND LANGUAGE DEVELOPMENT IN LOW SES LATINO FAMILIES

by Julissa C. Villanueva

Limited research has been conducted on the relation between children's vocabulary development and parenting practices of Latino families from low SES backgrounds (Eisenberg, 2002; Hurtado, Marchman & Fernald, 2006; Laosa, 1980). Twenty-six Spanish-speaking mothers and their young children, mainly of Mexican descent, were observed during a play activity. Children's vocabulary development was analyzed via parent report. All maternal utterances were coded for supportiveness or intrusiveness as well as for pragmatic functions. Analysis of reported vocabulary estimates revealed that at 18 months, children performed below expectations; children performed as expected for their age and gender at 21 and 24 months. Unexpectedly, these mothers were generally highly supportive but also displayed behaviors that were characteristic of intrusive parenting. Vocabulary outcomes were associated with more maternal descriptions and questions. Implications of these results as well as recommendations for future studies are discussed.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank my husband for his unconditional love, support, and understanding during my graduate studies. Thank you to friends and family for understanding the difficulties of remaining in touch when books and projects consumed all of my free time. I also want to thank Gisela Jia, Ph. D., her continuous support, guidance, and understanding, have helped me to envision my goals. Thank you to Henriette Langdon, Ed. D. and Gloria Weddington, Ph.D. for their support and feedback throughout the duration of this thesis. A heartfelt thanks to all of the members of the Stanford lab and especially to Nereyda Hurtado, Ph. D. for engaging me in those interesting discussions on the purpose and importance of research in the Latino population. A special thanks to Anne Fernald, Ph. D. for giving me the opportunity of making my dreams of completing my thesis a reality. Last but not least, a very special thanks to Virginia Marchman, Ph.D. for her relentless dedication to see this thesis to the end. Her patience throughout the many phases of this thesis and the vast amount of time devoted were invaluable. Her contribution and commitment have forever made an impact in my life.

TABLE OF CONTENTS

CHAPTER	Page
I. INTRODUCTION	
Background	1
Problem Statement	4
Purpose Statement	5
Research Questions	6
Definition of Terms	7
Assumptions	10
Limitations	11
Delimitations	11
Significance Statement	12
II. REVIEW OF THE LITERATURE	
Parenting Styles and Parenting Practices	13
Role of Culture on Parenting Practices	16
Summary	23
Pragmatic Functions of Maternal Talk	24
Summary	27
Influence of SES on Language Development and Parenting Practices	29
Summary	32
III. METHODOLOGY	
Introduction	33
Research Facility	33
Participants	34
Instruments	37
Naturalistic Observation of Maternal Talk	42
Procedures	47
IV. RESULTS	
Introduction	49
Vocabulary Development	50

	Trends in Parenting Practices and Pragmatic Functions of Maternal Talk	59
	Maternal Input and Vocabulary Development	66
V.	SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	
	Summary	70
	Conclusions	73
	Recommendations	77
	REFERENCES	80

LIST OF TABLES

	Page
Table 1: Family Demographics (Mean, Standard Deviation, and Range)	37
Table 2: Age of Participants at the Time Inventario I and Inventario II were Completed (Mean, Standard Deviation, and Range)	42
Table 3: Children's Vocabulary Raw Scores and Percentile Scores for WC and WP at 18-months from Inventario I	53
Table 4: Children's Vocabulary Raw Scores and Percentile Scores at 18, 21, and 24 months from Inventario II	58
Table 5: Frequencies and Proportions of Maternal Utterances during the 12-minute Sample Coded as Supportive versus Intrusive	61
Table 6: Frequency of Pragmatic Functions of Maternal Talk	64
Table 7: Correlations of Degree of Supportive Parenting Practices and Frequency of Pragmatic Functions of Maternal Talk	66
Table 8: Correlations of Supportive Parenting Practices and Frequencies of Pragmatic Functions of Maternal Talk with Vocabulary	69

Chapter I

Introduction

Background

Children's language development may be influenced by their daily experiences. Some of these experiences can include interactions with adults and peers, and opportunities to participate in activities around their community such as going to the parks, museums, stores, etc. These day-to-day life events allow children to experience situations that they may have not otherwise been able to experience in their immediate surrounding and can help them create a way of thinking and speaking about the world around them. Researchers have been particularly interested in the interactions children have with adults, more specifically the interactions children have with their parents, and the possible link that these experiences may have on language development (Masur, Flynn & Eichorst, 2005; Tamis-LeMonda, Bornstein & Baumwell, 2001). They have found within culture as well as cross-cultural differences in parent-child interaction styles and their relation to language development (Arcia & Johnson, 1998; Negy & Woods, 1992; Schulze, Harwood & Schoelmerich, 2001). As a result researchers have concluded that differences in parental input may have an effect on children's overall language development. For an explanation of how the term

Language Development is used in this thesis, refer to the *Definition of Terms* section.

Another way in which children's language development can be influenced is by the socioeconomic status (SES) of the family. For a brief description of SES please refer to the *Definition of Terms* section. Families who come from mid to high SES backgrounds (e.g., higher education and better income) can provide their children with more opportunities to experience the world outside of their immediate surrounding. As a result of being more affluent, mid to high SES families may travel more often, have more opportunities to visit educational places, and are in a better position to offer these opportunities when compared to families from lower SES backgrounds. These opportunities in turn lead to more language exposure, to diverse speakers outside the immediate family, and also provide content for children to talk about (Becker, 1981 in Duncan & Magnuson, 2001).

Studies focusing on parental input and SES as variables that influence the language development of children have primarily included monolingual English-speaking children who come from mid to high SES families (Dollaghan et al., 1999; Hoff, 2003; Hoff-Ginsberg, 1998). As a result, little has been reported about the influence of experiences and opportunities for engagement in different

activities, on the language development of Spanish-speaking children who come from low SES backgrounds. This is a population that warrants further research of the variables involved in the language development of children. The demand for research in this area becomes greater with the steady growth of this population.

Currently there are 44.3 million Hispanics living in the United States (U.S.) making this group the nation's largest ethnic or racial minority (U.S. Census Bureau, 2007). For a definition of the term Hispanic and how it is used in this thesis, please refer to the *Definition of Terms* section. From July 2005 to July 2006, the Hispanic population grew a total of 3.4%, making the Hispanic population the fastest growing minority group in the U.S. The U.S. Census (2007) reports that Spanish continues to be the non-English language most frequently spoken at home in the U.S., comprising a total of 28 million people or 12% of the population. A Current Population Survey released by the U.S. Census Bureau in August 2006 indicates that Hispanic workers earn less than non-Hispanic White workers. Among full-time workers 26.3% of Hispanics and 53.8% of non-Latino Whites earned \$35,000 or more. In addition, Hispanics are more likely than non-Hispanic Whites to live in poverty, 21.4% to 7.8% respectively. As mentioned earlier, variables such as children's daily experiences, children's interactions with

others as well as SES, have been a focus of investigation in the monolingual English-speaking population from mid to high SES backgrounds. Recent as well as past studies typically have not included families from low SES backgrounds. This in turn has left much to be understood about the language development of children who come from this population. Less than a handful of studies have examined these variables in the Spanish-speaking population from low SES backgrounds despite the growing trend of this population in the U.S. (Eisenberg, 2002; Hurtado, Marchman & Fernald, 2006; Laosa, 1980).

Problem Statement

Reports from U.S. Census data (2007) state that the Hispanic population is rapidly growing and that Hispanics are more likely than non-Hispanic Whites to come from low SES backgrounds. However, there has been an under-representation of this population in studies documenting the influence of parent's language input on children's language development. Given the known cultural differences of parental input and the impact of SES on language outcome, it is imperative for studies to explore the language development of children who come from these families.

Purpose Statement

The purpose of this thesis was to contribute to the existing literature information regarding the influence of parental input on the language development of children from Latino families from low SES backgrounds (for a definition of the term Latino please refer to the *Definition of Terms* section). This thesis sets out to shed light on four objectives. First, the thesis will add new information regarding the vocabulary development of Latino children from low SES backgrounds to the current literature. Although many studies have investigated the language development of monolingual English-speaking children, not much is known about how Latino children develop vocabulary.

Secondly, the researcher will investigate trends in parenting practices among Latino mothers from low SES backgrounds. Previous studies have focused mainly on the parenting practices of families from the majority culture. Only a few studies have investigated the parenting practices of Latino families from low SES backgrounds (Hurtado et al., 2006; Laosa, 1980).

The third objective is to investigate the underlying characteristics of parental input during parent/child interactions. Previous studies have investigated these illocutionary characteristics by focusing on specific variables of maternal input. These characteristics include but are not limited to the number

of questions parents ask, the number of descriptions provided to the child during an interaction, and/or the number of times parents repeat information (Masur et al., 2005; McDonald & Pien, 1980; Pine, 1992; Tamis-LeMonda et al., 2001).

The final objective of this thesis was to add information to the current literature regarding trends in the relationship between parenting practices of Latino mothers, the underlying behaviors of maternal input, and the language development of Latino children from low SES backgrounds. The way in which parents interact with their child can be a path to understanding the language development of that child (Bornstein & Tamis-LeMonda, 1989; Hoff & Naigles, 2002). This study has collected and coded naturalistic data of mother-child interactions during a free play activity in order to gather information on specific parenting practices and underlying characteristics of maternal talk. The mothers also filled out a vocabulary questionnaire in order to assemble a more complete corpus of their child's language development.

Research Questions

1. How does cultural background define parenting practices between the Anglo-European and the Latino population?
2. What developmental changes are observed in Latino children from 18-24 months in receptive and expressive vocabulary?

3. How frequently were the mothers in this study being supportive or intrusive in their maternal talk to their children?
4. What are the frequently produced pragmatic functions of supportive and intrusive utterances of Latino mothers from low SES backgrounds?
5. Are there any associations between parenting practices or pragmatic functions of maternal talk and children's vocabulary development?

Definition of Terms

For the purpose of carrying out the present research, the study used the following definitions:

Authoritarian. "The authoritarian parent attempts to shape, control, and evaluate the behavior and attitudes of the child in accordance with a set standard of conduct, usually an absolute standard, theologically motivated and formulated by higher authority. She does not encourage verbal give and take, believing that the child should accept her word for what is right" (Baumrind, 1971, p. 22).

Authoritative. "The authoritarian parent attempts to direct the child's activities but in a rational, issue-oriented manner. She encourages verbal give and take, and shares with the child the reasoning behind their policies. She

values both expressive and instrumental attributes, both autonomous, self-will and disciplined conformity” (Baumrind, 1971, p. 22).

Hispanic. Official use of the term Hispanic has its origins in the 1970 United States Census. The Census Bureau attempted to identify all Hispanics by use of the following criteria in sampled sets: Spanish speakers and persons belonging to a household where Spanish was spoken, persons with Spanish heritage by birth location, and/or persons who self-identify with Spanish ancestry or descent (Oboler, 1995). In this thesis the term Hispanic is used when referring to U.S. Census data or any other U.S. government data.

Intrusive. A maternal utterance was coded as intrusive if it was unrelated to the child’s previous utterance or if it attempted to disrupt the child's attentional focus. For example, the maternal utterance was coded as intrusive if the child was playing with a toy car, the child made a comment about the car, and the maternal utterance that followed was about the kitchen play set.

Latino. The term Latino was coined as a progressive alternative to the state imposed bureaucratic label Hispanic. The term Latino has been primarily adopted in urban areas in which various Latin American national groups are represented (Oboler, 1995). In this thesis the term Latino is used when referring to the participants in this study.

Language development. Refers to the general overall development of the child as it pertains to language. It includes but it is not limited to: phonology, morphology, syntax, pragmatics, and vocabulary.

Neglecting. These parents discourage self-assertion and may frighten the child about possible consequences. They become inaccessible when displeased by something the child said or did. They discipline harshly and feel that their needs take precedence over the child's needs (Baumrind, 1971).

Permissive. "The permissive parent attempts to behave in a nonpunitive, acceptant, and affirmative manner toward the child's impulses, desires, and actions. She consults with him about policy decisions and gives explanations for family rules. She presents herself to the child as a resource for him to use as he wishes, not as an active agent responsible for shaping or altering his ongoing or future behavior" (Baumrind, 1971, p. 23).

Supportive. A maternal utterance was coded as supportive if it followed the child's attentional focus or was a reply to the child's utterance. For example, an utterance was coded as supportive if the child was playing with a toy car and the mother made a comment about the color of the car.

Socioeconomic Status (SES). There is much debate regarding the manner in which to assess the SES of a household. The most widely used measurement of

SES has been the Hollingshead index (Hoff, Laursen & Tardiff, 2002). This is a Four Factor index of Social Status based on maternal and paternal occupation. Duncan and Magnuson (2001) argue that SES is too multi-faceted to be captured by a multi-factor index. They agree with other researchers in that SES should be measured by asking participants a handful of questions in the areas of household income, parental education, and occupational standing (Duncan & Magnuson, 2001). In this thesis SES was measured by asking participants about the highest level of education achieved, current occupation, and annual family income. Families from a low SES background, for the purpose of this thesis, were families who met one or more of the following criteria: one or both parents had less than a high school education, one or both parents worked in non-skilled or semi-skilled job, and the family income was less than \$50,000 a year.

Assumptions

To complete this research, the study assumed that:

- Participant mothers in this study completed the vocabulary questionnaire to the best of their ability.
- Quantity and quality of play interactions among mother-child dyads collected in the study are valid representations of how the

mothers in this study interact with their children during play in a non-research based setting.

Limitations

The following limitations were beyond the control of the research design:

- The study based its conclusions on the results from parent/child interactions when the child was approximately 18 months of age. However, the researcher is aware that parenting practices may change as the child gets older.
- Vocabulary questionnaires for this study were collected when the child was approximately 18, 21, and 24 months, however, the researcher is aware that vocabulary development continues to grow beyond 24 months. Therefore, generalizations about language development should not be made for children past the 24-month period.

Delimitations

The research design imposed the following delimitations:

- Naturalistic observations of mother-child dyads were limited to when the child was approximately 18 months of age.

- Language outcomes were based on a parent report when the child was approximately 18, 21, and 24 months of age.
- Language outcome scores may have been different if other measures had been used (e.g., standardized tests).

Significance Statement

The purpose of this study was to contribute to the current understanding of how children's day-to-day life experiences can influence their language development. The study investigated the influence of parenting practices and pragmatic functions of maternal talk on the vocabulary development of Latino children from low SES backgrounds. This is a rapidly growing population according to the U.S. Census Bureau 2007, as well as an under-represented population in the current literature of language development. Creating awareness of such variables can help professionals working with this population understand the values and beliefs of Latino mother's parenting practices, characteristics of maternal talk, and children's vocabulary development.

Chapter II

Review of the Literature

Parenting Styles and Parenting Practices

The goal of this section is to explain the differences between parenting styles and parenting practices. Previous studies on language development have not focused on describing the differences between these two terms. However, to define the consequences of children's language development as it pertains to parenting, it is important to distinguish between particular parenting practices and more global parenting characteristics.

The day-to-day experiences to which a child is exposed to can be determined by the goals and values envisioned by the parent for the child. These goals and values can differ between as well as within cultures depending on two different, but not separate parenting attributes known as parenting styles and parenting practices. Parenting style has been defined as the emotional climate the parent creates in order to express his/her attitudes and behaviors to the child (Darling & Steinberg, 1993). One of the earliest studies focusing on parenting style described this attribute as one broad parenting function – control (Baumrind, 1971). The researcher distinguished among four different types of parental control or parenting styles: authoritarian, authoritative, permissive, and

neglecting (for a description of these terms please refer to the *Definition of Terms* section). Parenting styles encompass parenting practices as well as other aspects of parent-child interaction such as tone of voice, body language, inattention, and bursts of temper (Darling & Steinberg, 1993). These aspects of parenting style communicate emotional attitude, but are not goal directed or goal defined.

While parenting style refers to the emotional climate created by the parent to convey goals and values, parenting practices are the specific techniques used by the parent in order to convey such goals and values (Darling & Steinberg, 1993). Darling and Steinberg (1993) state that parenting practices are behaviors defined by specific content and socialization goals. These socialization goals include both the child's acquisition of specific skills and behaviors (e.g., social skills and academic abilities) and the child's development of more global qualities (e.g., critical thinking, independence, curiosity). Talking to the child about objects in his or her direct attentional focus or presenting and talking about objects of which the child currently has no interest, are specific examples of parenting practices. Previous studies have investigated these particular parenting practices and their connections to the children's vocabulary development.

Researchers have identified two types of interaction practices that parents use when speaking to their children: supportive and intrusive (Cardona, Nicholson & Fox, 2000; Masur et al., 2005; McDonald & Pien, 1980). For a definition of these terms please refer to the *Definition of Terms* section. These studies have included children between the ages of 10 months and 5 years and found that parents who talk to their children about ongoing events (e.g., about objects that appear in the child's immediate environment) or who use a more supportive way of interacting with their child, have children with larger vocabularies scores. Conversely, parents who constantly introduce new objects to the child's attentional focus and who speak about objects that are not in the child's view, or who use a more intrusive manner of interaction, have children who have lower vocabulary scores.

Parenting style is displayed across a range of parent/child interactions. In contrast, parenting practices have a direct effect on the development of specific child behaviors. Darling and Steinberg (1993) used an example of an authoritative parent to distinguish parenting style from parenting practices. The authors explain that children of authoritative parents who emphasize academic achievement through their parental practices (e.g., checking homework assignments, helping the child with school projects, emphasizing the importance

of good grades, or encouraging the child to become involved in school functions) may perform better in school than children of authoritative parents who do not emphasize academic performance. This is because, although an authoritative parent encourages verbal give and take and shares with the child the reasoning behind her policies, her authoritativeness is independent of the socialization goals she may have for her child.

The goal of this thesis was to investigate particular parenting practices related to vocabulary development and not to analyze a group of behaviors as Baumrind (1971) did in her study of parenting styles. More specifically, this study analyzes interaction practices of supportiveness and intrusiveness among low SES Latino mothers.

Role of Culture on Parenting Practices

Researchers investigating Latino and Anglo-American cultures have found differences in parenting practices between these two cultures. Schulze, et al. (2001) analyzed the emphasis on autonomy among the Anglo-American culture, and the familial interdependence commonly found in Latino cultures. They found that Puerto Rican mothers have different expectations of when their infants should reach particular developmental milestones. The majority (62%) of Anglo-American mothers expected their infants to drink out of a cup by 9

months of age and to use utensils by 12 months. Only 14% of Puerto Rican mothers had these expectations for their infants at the same age. The authors state that physical control is part of the child rearing culture in the Latino population and that Latino mothers place low expectations on the self-help developmental milestones of their young children.

Furthermore, research has indicated that Latino mothers place a greater emphasis on maintaining strong family ties, teaching verbal and nonverbal rules of respect, and teaching moral education to their children (Arcia & Johnson, 1998; Negy & Woods, 1992). Mothers of Mexican descent have been found to view obedience, responsibility, and respectfulness as important qualities that a child must attain.

Arcia and Johnson (1998) interviewed mothers of Mexican descent to analyze their expectations of the values their children should acquire and how their children come to understand and develop those values. The mothers were asked to sort the questions asked by the interviewer by using a Q-sort task. To complete the task the mothers had to sort a set of 15 cards, each of which had a characteristic that could be attributed to the child. The cards were sorted into: *very important*, *somewhat important*, and *not important*. Mothers were then asked to set aside two most important cards from the very important group and two

least important cards from the not important group. They found that Mexican mothers placed high importance on their children acquiring a sense of right and wrong and on being good students. Less importance was placed on being the best, or being independent (Arcia & Johnson, 1998). In fact, after further analysis of the responses given by the mothers, the authors found that mothers of Mexican descent could not define independence in the context of children. The mothers in the study explained independence as living alone and acting without the benefit of others.

Carlson and Harwood (2003) Halgunseth, Ispa and Rudy (2006) and Schulze, et al. (2001) found that Latino mothers tend to be more physically controlling and have relatively low expectations for their children's self-help and soothing skills. Researchers observed that, in general, physical control in Latino cultures is viewed as acceptable and is often used to teach the child manners and appropriate ways to behave. Carlson and Harwood (2003) compared the parenting practices of 28 Puerto Rican mothers living in Puerto Rico to those of 32 Anglo American mothers from Connecticut. The researchers found that Puerto Rican mothers were more physically controlling than Anglo American mothers. They concluded that Anglo-American cultures place great value on individual autonomy and any dependent behaviors displayed by the child may

be viewed as a threat to the child's development of social competence and acceptance in the larger community.

Researchers have used several measures in order to capture levels of physical control between Latino mothers and Anglo-American mothers. Measuring differences of physical control between these two cultures has been primarily accomplished during free play activities with their children. One type of measure has been to examine the use and amount of directives and modeling that mothers use during free play interactions with their children. These researchers have focused on comparing mother-child interactions of Latino mothers and Euro-American mothers (Calzada & Eyberg, 2002; Laosa, 1980; Planos, Zayas, & Busch-Rossnagel, 1997). Results indicate that Latino mothers used more directives and modeling compared to their Euro-American counterparts.

Levels of control during free play interactions have also been measured by examining intrusive and supportive behaviors that mothers exhibited during interactions with their children. Intrusiveness was defined by attempts to control a child's behavior or attention and was found to hinder language development (Cardona et al., 2000; Mahoney & Neville-Smith, 1996; Masur et al., 2005). Previous studies have measured intrusiveness by coding the number of times a

mother leads the interactions and takes the child away from his current focus of interest, number of imperatives used in the conversation with the child, frequent negation of the child's actions, inequality of participation, as well as frequent and rapid topic change (Masur et al., 2005; McDonald & Pien, 1980).

Masur, et al. (2005) and McDonald & Pien (1980) reported that supportiveness towards the child during the interaction had a positive impact on the language development of the child. Supportiveness in these studies was measured through mother-child interactions by coding the number of times the mother followed the child in conversation, described the child's immediate environment or interests, frequency of questions asked, and allotment for equal or greater participation to the child during conversation. Tamis-LeMonda, et al. (2001) found that mothers who were more supportive of their child's vocalizations, had children that spontaneously expressed first words, achieved 50 words in expressive language, engaged in word combinations to make phrases, and used language to speak about past events sooner than children with less supportive mothers.

Masur, et al. (2005) coded mother-child interactions of mainly European American mothers and their children to determine if levels of intrusiveness or supportiveness would have an effect on their children's expressive vocabulary

development (e.g., words the child says). Expressive vocabulary development was measured in three ways: reported vocabulary, observed vocabulary, and total vocabulary. Reported vocabulary was collected via a maternal interview in which the mother answered questions regarding the words, sounds, and actions that the child used as well as questions regarding language comprehension and production. The authors quantified the observed vocabulary on the transcripts of the videotaped sessions as all conventional words and conventionally meaningful vocalizations produced by the children. The identified words were marked on an expanded version of the checklist that was used during the maternal interview. Total vocabulary was compiled by combining the reported vocabulary collected during the maternal interview and the observed vocabulary that was collected from the transcription of the mother-child interaction sessions. The researchers found that supportiveness positively predicted expressive vocabulary development in children while intrusiveness was a negative predictor. Furthermore, mothers that provided more utterances describing aspects of the environment to which their children were currently attending had children who acquired larger reported, observed, and total expressive vocabularies.

Although there is a general picture of the effects of parenting behavior on language development among the Anglo-American culture, not much is known about these parenting practices among the Latino culture. The studies briefly described above on mothers' supportiveness and intrusiveness during mother-child interactions primarily included monolingual English-speaking participants. Only a limited number of studies have analyzed levels of control and vocabulary development in Latino mother-child interactions.

Cardona, et al. (2000) compared parenting styles of Anglo-American mothers and Latino mothers. They concluded that Latino mothers displayed an authoritarian parenting style while Anglo-American mothers used an authoritative parenting style. However, the aim of the researchers was to examine a variety of behaviors in order to investigate the parenting styles of Latino mothers when compared to Anglo-American mothers and not aimed at examining particular behaviors of parenting practices. The aim of this current thesis is to investigate the particular parenting practices of supportiveness and intrusiveness among the Latino culture, specifically among those of Mexican descent in order to add to the literature about the parenting practices of this population.

Summary

In the studies reviewed for this thesis, the Anglo-American and Latino cultures varied among several different variables, including ideas of achievement of children's developmental milestones, autonomy, and levels of physical control. They found that Latino mothers have a different perception about when children should reach certain developmental milestones as a result of the emphasis on familial interdependence that characterizes this culture. Conversely, achievement of developmental milestones is held in high regard in the Anglo-American culture and mothers of this culture place a greater emphasis on autonomy.

Researchers investigating parenting practices, such as physical control, found that among Latino cultures physical control is viewed as acceptable and is used to teach the child how to behave. As a result Latino mothers have been found to be more physically controlling than the Anglo-American mothers.

Levels of physical control have been primarily investigated during free play interactions among children and their mothers. One method used has been to examine the use of directives and modeling between the two cultures. Researchers have found a greater use of directives and modeling among Latino mothers. Another method used to measure physical control has been to examine

variables of intrusiveness and supportiveness. Researchers have associated supportiveness with enhanced vocabulary development in children while intrusiveness has been considered to interfere with vocabulary development.

Measuring variables of physical control, such as supportiveness and intrusiveness, has primarily been done among the Anglo-American culture and only a few researchers have investigated these variables among the Latino culture. For this reason this project sets out to investigate these variables among participants of Mexican decent in order to begin to understand these practices in this population.

Pragmatic Functions of Maternal Talk

Several researchers have investigated the interactional intent of maternal talk (Flynn & Masur, 2007; McDonald & Pien, 1980; Pine, 1992; Tamis-LeMonda et. al., 2001). The goal of these researchers has been to focus on particular interactional/pragmatic functions of maternal talk rather than on semantic or syntactic structure of mothers' speech to their children. By doing so, these researchers focused on investigating some of the following characteristics of maternal talk during interaction sessions with their young infants and toddlers: number of descriptions, number of questions, number of times mothers try to direct their children's attention (attentional directives), number of times mothers

try to direct their children's behavior (behavioral directives), and many others. Please refer to Pine (1992) and McDonald and Pien (1980) for a more detailed review.

One of the first studies to directly investigate pragmatic functions of maternal talk was by McDonald and Pien (1980). The authors analyzed a total of 17 pragmatic functions during a 30-minute play session among 11 mothers and their children. Families were of middle class background and educational level ranged from one year of college to the doctoral degree. Mothers were chosen on the basis of their child's age, which fell within a pre-selected range of 2.5 – 3.0 years. The authors found that they were able to cluster pragmatic functions into supportive or intrusive parenting practices. In other words they found that supportive parenting practices were correlated with pragmatic functions in which mothers intentions were to include the child as an interactional partner in the conversation. In contrast, intrusive parenting practices were correlated with pragmatic functions in which mother's conversational intent was to control and direct the child's attention or focus.

In a more recent study focusing on the pragmatic functions of maternal speech, Flynn and Masur (2007) analyzed four mutually exclusive categories of pragmatic functions, in which two of the categories were most likely to be

correlated with supportive parenting practices (descriptions and indirect commands) and two were most likely to be correlated with intrusive parenting practices (attentional directives and indirect commands). The authors reported that characteristics of maternal talk were adopted from Pine's (1992b) study on pragmatic categorization. A total of 20 mothers and their first-born children participated in the study. The authors reported that the children were monolingual English-speakers with no major health or developmental issues at the time of the study. The authors videotaped dyadic interactions in two naturalistic contexts (bathtime and free play). The sessions took place during four different home visits when children's mean ages were 10 months, 13 months, 17 months, and 22 months of age. Family income and educational levels were not reported.

Flynn and Masur (2007) were interested in investigating developmental changes in mother's production of supportive or intrusive pragmatic functions. In addition, they were also interested in reporting whether or not these functions were consistent across contexts as well as whether pragmatic functions remained stable over time in each context. Results revealed that the mothers in the study spent the majority of their time describing aspects of the environment and producing indirect commands and that frequencies of these pragmatic functions

increased slightly as time passed. They also found that direct commands were provided most frequently and at a greater rate during bathtime than playtime, confirming that researchers should be aware of the limitations of investigating parent-child interactions in only one setting. In answer to their final question, the authors found that there was no consistency across contexts at any time for indirect and direct commands. However, descriptions demonstrated stability across all home visits and in both contexts. Attentional directives were stable across the first two home sessions in playtime and in the first home session for bathtime.

Summary

The studies highlighted above on pragmatic functions of maternal talk reveal that it may be possible to infer parenting practices of monolingual English-speaking families by the exhibited maternal speech characteristics. The authors of these studies suggest that pragmatic functions of supportive parenting practices are most likely to include descriptions, frequent use of questions, and indirect commands. Alternatively, pragmatic functions of intrusive parenting practices are most likely to include attentional directives and direct commands.

In the McDonald and Pien (1980) study the authors reported that families were from middle class backgrounds with at least a high school degree, however,

no mention is given to the languages spoken by participants or the annual family income. Flynn and Masur (2007) do report that participants were from monolingual English-speaking households, however, the researchers did not comment on the educational level or income of the families. Other studies focusing on the pragmatic functions of maternal talk have mainly included participants from high or mid SES backgrounds in which the primary language of the home was English (Hoff & Naigles, 2002; Pine, 1992; Tamis-LeMonda et al., 2001). Therefore, an overall general idea currently exists of the pragmatic functions typically found in monolingual English-speaking families of mid to high SES backgrounds. As a result there is a current lack of understanding of how pragmatic functions are utilized in families of low SES backgrounds in which Spanish is the primary language of the home. The goal of this thesis was to investigate the use of four of the pragmatic functions of maternal talk that have been used in other studies focusing on these variables. Therefore, this particular investigation will add information to the current literature regarding the production of particular pragmatic functions of Latino mothers from low SES backgrounds.

Influence of SES on Language Development and Parenting Practices

The literature reports that SES may play a role in the way in which parents interact with their children. Level of education, labor force status, occupation, and income are the most regularly used measurements of SES in studies that have focused on language development and parenting practices (Dollaghan et al., 1999; Eisenberg, 2002; Hoff-Ginsberg, 1998; Hoff, 2003; Hurtado et al., 2006).

Dollaghan, et al. (1999) analyzed four different measures of spontaneous speech and language samples to determine if children's language abilities differed according to mother's educational level. Participants were 240 three-year-old monolingual English-speaking children with no history of health or developmental issues. Mothers' level of education was classified in one of three groups: 1) less than high school education, 2) high school graduate, or 3) college graduate. Results indicated that as maternal education increased so did mean scores of mean length of utterance in morphemes, number of different words the children knew, and total number of words they knew. In addition, higher maternal education was linked to children's higher standard scores on the Peabody Picture Vocabulary Test-Revised (Dunn & Dunn, 1981). The majority of the studies that have analyzed the effect of SES on language development have focused on children who come from middle or high SES backgrounds in which

English is the primary language spoken in the home (Dollaghan et al., 1999; Hoff-Ginsberg, 1998; Hoff, 2003).

Hoff (2003) analyzed the vocabulary development of 33 monolingual English-speaking children from high SES families and compared the results to the vocabulary development of 30 monolingual English-speaking children from mid SES families. The results indicated a significant correlation between mother's verbal interaction with their children and the children's level of vocabulary development. Mothers of high SES backgrounds produced richer semantic and syntactic utterances and had more episodes of joint attention and topic continuing replies. The researcher concluded that children who heard longer utterances were able to build productive vocabularies at faster rates than children who heard shorter utterances. These findings suggest that the way in which mothers of high SES backgrounds spoke to their children (e.g., using longer semantically and syntactically richer utterances as well as more episodes of topic continuing replies) may have had an influence on their children's vocabulary development.

Arriaga, Fenson, Cronan and Pethick (1998) compared the vocabulary norms of a parent report measure of toddlers from mid SES backgrounds to the vocabulary of 103 children participants in their study. Participants were 59

males and 44 females from low SES backgrounds. The middle income and low-income group differed in, ethnic composition, education, and linguistic environment. The middle-income sample was composed mainly of white parents while the low-income sample was principally non-white. The low-income sample had less formal schooling and a higher proportion of this sample was exposed to a second language. Outcomes indicated significant differences in vocabulary percentile scores between the two groups. In addition, children from the mid SES group began to combine words and use more complex sentences at an earlier age than children from the low SES group.

Very few studies have analyzed the effect of SES on the parenting practices of Latino mothers with the exception of (Eisenberg, 2002; Hurtado et al., 2006; Laosa, 1980). Eisenberg (2002) collected and analyzed conversational interactions of 40 mothers of Mexican descent and their 4 year-old children during two different tasks (one school related and one home related task). Twenty mothers were from low SES and 20 mothers were from mid SES backgrounds. Analysis of the data revealed that mothers from mid SES backgrounds used more positive feedback, and more semantically complex utterances than did mothers from low SES backgrounds. Mothers from mid SES backgrounds also mentioned more frequently complex concepts and went

beyond the observable to infer effect or cause, predict outcome, or to make conclusions (e.g., “If you put the tree there, you won’t have room for the house”).

Summary

Studies have found that mothers from low SES backgrounds use less complex utterances when talking to their children. Mothers from high SES backgrounds use more positive feedback and more semantically richer utterances when communicating with their children. These studies also suggest that the vocabulary of children who come from mothers of high SES backgrounds is larger than those of children from low SES backgrounds. Researchers conclude that the difference in vocabulary size of children from high SES backgrounds compared to those of low SES backgrounds may be a result of maternal input. Although many studies have compared the parenting practices of mothers from low SES backgrounds with mothers of high SES backgrounds, these studies have mainly focused on the majority culture (Anglo-American mothers). As a result much is known about the vocabulary development of children and parenting practices of monolingual English-speaking children and families. However, a need exists for studies that investigate the influence of SES on the parenting practices of Latino mothers from low SES backgrounds and the vocabulary development of children from this population.

Chapter III

Methodology

Introduction

There is currently an under-representation of the Hispanic population that comes from low SES backgrounds in studies documenting parental input and children's vocabulary development. This population is rapidly growing in the U.S. according to a U.S. Census report in 2007. Not much has been documented regarding the trends of parenting practices, pragmatic functions of maternal talk, and the vocabulary development of children who come from this population. The purpose of this thesis was to investigate trends of these variables and to analyze associations between them.

This section includes information regarding the methods used to carry out data collection and analysis of the information involved in this thesis. The following major topic headings are included in this section: *Research Facility*, *Participants*, *Instruments*, *Naturalistic Observation of Maternal Talk* and *Procedures*.

Research Facility

This research was conducted in a satellite laboratory located in a low-income community a few miles from the Stanford University campus. The majority of the residents of this community were Latino families. Many were

recent immigrants to the U.S. from Mexico. The satellite laboratory was located in a five-room house. Two rooms were used as a testing room and an office. The living room served as a comfortable reception room and play area for visiting families. This laboratory was staffed with five bilingual researchers who were native speakers of Spanish and who conducted all recruitment efforts and communicated with participant families in Spanish.

Participants

Latino families were recruited through various sources, including Sacramento county birth records, the East Palo Alto Library reading program, and the community health center. Parent's names and addresses were gathered from the Sacramento county birth records. Mothers who had given birth within the 12-16 months, before the study began, were mailed postcards informing them about the study. The phone number to the laboratory was written on the card so that parents would have the choice to contact the lab if they were interested in learning more information. Once postcards were mailed out, the names and addresses were shredded and families were not contacted again unless they called the laboratory. Due to the low level of replies received from the postcards, a bilingual Spanish-English speaking research assistant visited facilities within the community where mothers and their children were likely to be. The research

assistant introduced herself to parents and gave parents a brief background regarding the laboratory and the purpose of the study. The research assistant then supplied parents with flyers that included information about the study along with the phone number to the laboratory.

A total of 76 families were initially recruited to participate in the study. For purposes of analysis it was important to ensure that the recorded interactions included only mother and child dyads. Therefore, 27 participants were excluded because either there was a sibling or another family member involved in the interactions. Twenty-one families were excluded because they either did not start participation in the study or missed a visit. Since the researcher was only interested in participants from low SES backgrounds, two families were excluded because the annual family income exceeded \$50,000.

Participants were 26 mothers and their children (10F, 16M). Although all of the mothers were born outside of the Mainland U.S. (23 in Mexico, one in Peru, one in El Salvador and one in Puerto Rico) all of the children who participated in the study were born in the U.S. Based on parents' responses on the *Basic Information Form* (BIF), all of the children were born full term, with no prenatal difficulties, major illnesses, developmental delays, or hearing loss. A detailed description of the BIF is provided in the *Instruments* section of this

chapter. Another criterion for participation was that the child was learning predominantly Spanish in the home and no more than 15% of the child's daily language exposure was in a language other than Spanish. The amount of language exposure that the child received in a day was calculated using a *Language Background Questionnaire* (LBQ). The LBQ is explained in detail in the *Instruments* section of this chapter.

Most mothers were either not employed outside of the home (n=20), had non-skilled jobs (n=3), semi-skilled jobs (n=1), or held a semi-professional job (n=2). Most fathers were in non-skilled jobs (n=15), semi-skilled jobs (n=1), skilled labor (n=7), or owned a small business (n=1). Two fathers chose not to respond to the question. Descriptive information regarding family demographics is presented in Table 1. The majority of families, both mothers (58%) and fathers (58%), reported having less than a high-school education, although a range of educational levels was represented (6-16). Two mothers and one father, all from different households, reported having completed a college education. However, these families were included in our study because for two of the families the combined income was less than \$25,000 a year. The third family earned less than \$50,000 a year, the mother was a college graduate and

had a semi-skilled job, and the father was a high-school graduate and worked at a non-skilled job.

Thirteen (50%) of the mothers who participated reported nine years of formal education or less, seven (27%) reported having some high school or being high school graduates, and the remaining six mothers (23%) reported having some college education or had obtained a college degree. The average annual family income was \$33, 653, with 17 families (65%) reporting an income of \$25,000 or less and nine families (35%) reporting an income of \$50,000 or less.

Table 1

Family Demographics (Mean, Standard Deviation, and Range)

	Mean	S.D.	Range
Mother education	10.2	3.1	6-16
Father education	9.5	3.7	3-16
Family income	\$33,653	\$12,129	\$25,000-\$50,000

Instruments

Gathering background information.

To collect information about basic background, language background, medical history, education, and salary, families were contacted by telephone by a

Spanish-speaking research assistant. Following an introduction by the Spanish speaking research assistant regarding the purpose of the phone call, families were asked the questions found in the Spanish version of the *Basic Information Form* (BIF) (Formulario de Información Básica) and the *Language Background Questionnaire* (LBQ) (Cuestionario Sobre Antecedentes del Lenguaje).

The BIF is a 2-page questionnaire in which parents answer questions in the following 6 areas. 1. *Basic Background* (e.g., child's name, home address, birth order, and birth weight), 2. *Health* (e.g., complications during labor and delivery, chronic ear infections, hearing loss, and any history of language or neurological impairment in the family), 3. *Caregiver Information* (e.g., who lives with the child and who participates in the day to day care of the child), 4. *Education* (e.g., mother and fathers highest level of education obtained), 5. *Occupation* and 6. *Salary* (adapted from Jackson-Maldonado et al., 2003).

The LBQ was adapted from Marchman & Martínez-Sussman (2002) and was specifically created to provide a comprehensive picture of the English and Spanish input of each child. It was used in this study to collect information regarding the characteristics of the child's language learning environment and the child's degree of exposure to English and Spanish in his/her day-to-day activities in the home. The LBQ is an interview that takes approximately 20-30

minutes to complete. Families were asked to answer questions such as: the preferred language(s) used in the home, the language(s) they used to speak to each other and to their child as well as the language(s) the child used when playing alone. The parents were also asked to describe a day in the life of the child and to answer questions regarding wake-up time, naptime, and bedtime. Parents were probed regarding persons who were in regular contact with that child and answered questions regarding how many hours the person spent with the child per week and what languages were spoken to the child (English, Spanish, or both). When both languages were reported, parents were asked to give an estimate of the relative proportion of English and Spanish used.

Expressive language measures.

Spanish-language adaptations of the *MacArthur-Bates Communicative Development Inventory* (CDI) the *MacArthur-Bates Inventarios del Desarrollo de Habilidades Comunicativas* were used to collect parental report data on children's vocabulary development (Jackson-Maldonado et al., 2003). The Spanish adaptations of the CDI are designed to be culturally and linguistically appropriate for Mexican and Mexican-American children. These instruments have been found to be a valid and reliable measure of vocabulary development for Spanish-speaking children (Marchman & Martínez-Sussmann, 2002; Thal,

Jackson-Maldonado & Acosta, 2000). Two versions of the Spanish CDI adaptations currently exist, the Inventario I (Palabras y Gestos) and the Inventario II (Palabras y Enunciados). Depending on the age of the child when the parent was first contacted for participation in the study, parents were asked to complete the Inventario I or Inventario II.

The Inventario I is a 2-part questionnaire that is appropriate for typically developing children 8-18 months. The first part is composed of four subsections. The major portion of part I is section D, a 428 item checklist. Here parents indicate the words their child “understands” and “understands and says”. The vocabulary items are separated into 22 semantic categories such as animal names, household items, clothing etc. The second part asks parents to record the communicative and symbolic gestures the child has attempted or completed. The form yields separate indexes of Words Comprehended (WC) and Words Produced (WP).

The Inventario II is appropriate for typically developing children between the ages of 18-30 months. On this form, parents report the words their child can say as well as examples of the child’s spoken utterances. The Inventario II is also a 2-part questionnaire in which parents report the current vocabulary and grammatical structure of the child’s language. Part I is composed of 680 words

organized into 23 semantic categories (e.g., animal names, vehicles, clothing etc). Each category has a list of words and parents are asked to indicate if their child uses those words. In contrast to the vocabulary checklist on Inventario I, the vocabulary checklist of the Inventario II is limited to language production, asking parents to only indicate the words their child “says”. In Part II parents are asked to report information regarding the child’s ability to conjugate verbs as well as on the grammatical complexity of the child’s spoken language.

Vocabulary data was collected at three data points when children were approximately 18, 21, and 24 months. Descriptive information regarding the ages of children when the Inventarios were collected is presented in Table 2. One mother did not complete the Inventario I; therefore vocabulary data at this time was analyzed for 25 of the participants. All of the mothers completed the Inventario II at the 24-month data point, 21 mothers completed the Inventario II at the 21-month data point, and 25 mothers filled out the Inventario II at the 18-month data point. Parents brought the completed Inventario I or Inventario II to their appointments at the 18 and 24-month visit. When the child was approximately 21 months, parents were mailed the Inventario II. Parents also received a self-addressed stamped envelope and were asked to complete the Inventario and return it to the laboratory.

Table 2

Age of Participants at the Time Inventario I and Inventario II were Completed (Mean, Standard Deviation, and Range)

	Mean	S.D.	Range
Inventario I	17.4	1.0	16-19
Inventario II (18m)	18.1	1.0	16-20
Inventario II (21m)	21.2	.68	20-23
Inventario II (24m)	24.0	.69	23-26

Naturalistic Observation of Maternal Talk

Interactions between mother/child dyads were video recorded during natural play when the child was approximately 18 months of age. Mothers and their children were videotaped for a total of 20 minutes while playing with developmentally appropriate toys. In order to standardize all 26 samples of mother/child interactions only 12 minutes of the interactions were used in the analysis. Analysis of interactions commenced three minutes after the recording began and continued for exactly 12 minutes after. The initial three minutes of the interactions were not used in the analysis so that all coding would begin after the experimenter was done setting up the recording equipment as well as to allow

some time for engagement in an activity between mother and child. The toys consisted of four sets of themes: a play-food set, a construction set, a school bus set, and a farm animal set. The mothers were instructed to play with their children “as they would at home.”

The interactions were recorded using a Sony digital video recorder and a Marantz digital audio recorder. To ensure that both the mother and child speech would be clear on the recordings, two microphones were used. The first microphone was a Shure wireless room microphone that was placed within two feet of the participants. The second microphone was a lapel microphone worn by the mothers.

Utterances.

Bilingual research assistants were trained to separate utterances according to pause, intonation, and contour. A pause was considered a break in a verse or a brief suspension of voice. Intonation was described as a rise or fall in pitch of the voice. Contour was described as a meaningful change in intonation. The research assistants created a transcript of mother and child interactions that segmented their speech into utterances. A primary transcriber created an initial transcript that was then reviewed by a second trained transcriber. Inter-rater agreement on how to separate utterances was first established among the

transcribers, agreement among the two was calculated to be within 95-96%.

Disagreements were resolved through discussion.

Data transcription.

Trained bilingual research assistants with native-like proficiency in Spanish transcribed the mother-child interactions. The interactions were transcribed into the Child Language Data Exchange System (CHILDES) (MacWhinney & Snow, 1985). CHILDES is a data-sharing project that can be used to transcribe child and child-directed language utterances. The CHILDES can also be used to analyze the structural and syntactic forms of the child's utterances, however, for purposes of this thesis the program was only used to transcribe the mother-child interactions.

The transcribers first reviewed the videotapes (without audio) in order to make observations regarding the mother/child interaction and to familiarize themselves with the dyads. They then listened to the audiotapes from start to finish without transcription involved. The transcribers then listened to the audiotape a second time and transcribed all of the mother and child utterances into the CHILDES program. Once the transcription of the audiotape was complete, transcribers then listened to the audiotapes a third time and made changes to the transcripts as appropriate. As a final step a second transcriber

listened to the audiotape while reading the transcript. Disagreements were resolved through discussion.

Coding maternal talk.

Bilingual research assistants then coded all of the maternal utterances for parenting practices of supportive or intrusive by watching the videotapes. An utterance was coded as supportive if the utterance followed the child's attentional focus and if the utterance was related to what the child was attending to. For example, an utterance was coded as supportive if the child was playing with the school bus and the mother made a comment about how the bus works, who rides the bus, or how many wheels are on a bus. An utterance was coded as intrusive if the maternal utterance disrupted the child's attentional focus. For example, while the child was playing with the bus, the mother introduced the play-food set and talked about cooking.

Once the utterances were coded for supportive or intrusive, all utterances were then coded for pragmatic functions of maternal talk by using one of the following categories listed below. To ensure consistency of coding among all transcriptions, the same two coders assigned codes of parenting practices and pragmatic functions of maternal talk to all the transcripts. As a first step the two coders established inter-rater agreement for coding the utterances. Reliability

between the two coders was calculated to be within 95-96%. Disagreements were resolved through discussion.

Pragmatic functions of maternal talk.

1. *Attentional Directives (ADs)*. Utterances, including vocatives, which seek to attract, direct or re-direct the child's attention including calling the child's name.

-Eric mira (Look Eric)

2. *Direct Commands (DCs)*. These were utterances that tell the child what to do and always included an imperative.

-ven aquí (come here)

-márcale (dial)

3. *Indirect Commands (ICs)*. These were utterances that suggested an action and never included an imperative.

-Vamos a poner a él que maneje (let's have him drive)

4. *Descriptions*. These utterances included object labels and were coded as descriptions if it commented on actions, feelings, objects, individuals, events, or attributes in the child's attentional focus.

-habla por teléfono en éste habla (talk on the phone with this one talk)

- un avión (an airplane)

5. *Questions.* An utterance was coded as a question if the utterance required a response from the child and was related to an activity that the child was currently engaged in.

6. *Other.* These were utterances that occurred during the 12-minute session and did not fit into any of the categories outlined above. They were included in the mothers' total utterance frequencies but not otherwise examined.

-Chi: baño (bathe)

-Mot: ya (ok)

Procedures

Families who displayed interest in learning about the study or participating in the study were contacted by phone by a Spanish-speaking research assistant. During the phone contact families were asked the questions found on the BIF and LBQ forms before they were scheduled. Once the BIF and LBQ forms were completed, parents were asked to come in at a time and date that was convenient for them. Parents were scheduled one week from the date of the phone interview to allow enough time for the *Inventario* to arrive at their home. On the date of the appointment two bilingual research assistants greeted the participants at the door. One research assistant interacted with the child

while the other research assistant collected the Inventario, briefed the parent on the session, and explained the consent forms. For the data involved in this thesis, participants were escorted into a play area to begin collection of naturalistic interactions between the mother and child.

One of the research assistants showed the child where the toys were and helped the child bring the toys to a designated area in the living room where video recording occurred. In the meantime, the second research assistant adjusted the camera and audio equipment for recording and gave the mother the lapel microphone to wear. Mothers were then instructed to play with their child “as they would at home” and were left in the living room area for a total of 20 minutes while the camera and audio equipment recorded their interactions. At the end of the 20-minute period the research assistants returned to the living room area and stopped the video and audio equipment from recording. One of the research assistants helped the child clean up the toys while the second research assistant completed any final paperwork and interacted with the parent; this marked the end of the session.

Chapter IV

Results

Introduction

As a result of the rapid and steady increase of the Latino population from low SES backgrounds in the U.S., it has become important to understand trends of parenting practices of families and use of pragmatic functions of maternal talk as well as the vocabulary development of children in this population (U.S Census Bureau, 2007). The goal of this thesis was to investigate these variables in Spanish-speaking Latino mothers and their children. This section attempts to bring clarification to this issue by answering the following questions:

1. What developmental changes are observed in Latino children from 18-24 months in receptive and expressive vocabulary?
2. How frequently were the mothers in this study being supportive versus intrusive in their maternal talk to their children?
3. What are the frequently produced pragmatic functions of supportive and intrusive utterances of Latino mothers from low SES backgrounds?
4. Are there any associations between parenting practices or pragmatic functions of maternal talk and children's vocabulary development?

These questions were organized into three sections. The first section discusses *Vocabulary Development*. This section includes an analysis of mothers' reports of their children's vocabulary development when children were approximately 18, 21, and 24 months of age. The second section is titled, *Trends in Parenting Practices and Pragmatic Functions of Maternal Talk*. In this section, investigations were conducted on the trends of parenting practices as well as the pragmatic functions of maternal talk that mothers produced during the 12-minute interaction session with their children. The third section, *Maternal Input and Vocabulary Development*, focuses on the interactions among vocabulary development, parenting practices, and pragmatic functions of maternal talk.

1. *What developmental changes are observed in Latino children from 18-24 months in receptive and expressive vocabulary?*

Vocabulary Development

Table 3 reports the mean, standard deviation, and range for total vocabulary raw score and percentile of Words Comprehended (WC) and Words Produced (WP) from the Inventario I.

Mothers in this study reported that, on average, children comprehended a total of over 170 words or more with an average percentile score of 40. The table reports a wide range of total number of WC as well as a wide range of percentile

scores. Individual analysis of the words each child comprehended revealed that one child was reported to comprehend as few as 38 words. The majority of children ($n=13$) were reported to comprehend between 100-200 words, four children were reported to comprehend between 200-300 words, two children were reported to comprehend between 300 and 400 words, and one child was reported to comprehend 409 words.

Analysis of the total number of words children were producing when they were approximately 18 months revealed that, on average, children produced less than 30 words, with an average percentile score of 37. Individual analysis of number of words children could produce revealed that six children were producing less than 10 words, 12 children could produce between 10 and 30 words, six children could produce 30 to 50 words, and two children could produce over 90 words.

The mean number of words comprehended was greater than the mean number of words produced $t(25) = 5.26; p < .05$. These results are to be expected since research has shown that children at this age are able to understand more words than they can produce (Benedict, 1979; Jackson-Maldonado, Thal, Marchman, Bates & Gutiérrez-Clellen, 1993).

A one-sample t-test was completed to investigate whether children in this study were performing at age-based expectations. Results revealed that the population in this study performed as expected to the norms of the average population of children 18 months of age on words comprehended $t(25) = .11, p < .05$. On the other hand, one-sample t-test results indicated a significant difference between the number of words produced in this sample compared to the average population of children at approximately 18 months of age $t(25) = .006, p < .05$. This indicates that at this age children in this study were reported to produce fewer words than would be expected based on their age and gender.

Table 3

Children's Vocabulary Raw Scores and Percentile Scores for WC and WP at 18-months from Inventario I

		18 months		
		Mean	S.D.	Range
WC				
	Raw score	179.3	95.1	38-409
	Percentile	40.4	28.9	8-95
WP				
	Raw score	29.2	31.2	3-148
	Percentile	37.2	21.9	13-91

Table 4 reports the mean, standard deviation, and range for vocabulary raw score and percentile scores from the Inventario II when the children were approximately 18, 21, and 24 months of age.

Mothers completed the Inventario II when children were approximately 18 months of age ($M=18.1$). As mentioned in the method section of this thesis, the Inventario II does not ask mothers to report on the words children can comprehend, they are prompted to report only on the words their children can

produce. On average, mothers reported that at approximately 18 months of age their children could produce more than 50 words. The average percentile score at this data point was above 30. The range of total words produced at this stage was between 10 and 249 with the majority of children ($n=18$) producing less than 50 words, 5 children producing between 50 and 100 words, and two children producing over 150 words. Before discussing the results found for the 21 and 24-month data point, it is worthwhile to compare the results of the Inventario I found on Table 3 with the results of the 18-month data point of the Inventario II.

Mothers reported that their children could produce more words when they completed the Inventario II when compared to reports of words produced in Inventario I (Table 3). In addition, mothers reported a wider range of words produced on the Inventario II when compared to Inventario I. Two different explanations can clarify the reasons for these results. First, at the time when the mothers in the study completed the Inventario I children's ages ranged between 16-19 months ($M=17.4$). The age range when the Inventario II was completed was between 16-20 months ($M=18.1$). Please refer to Table 2 for more detailed information of participant's ages. Therefore, on average, mothers completed the Inventario II one month after completing the Inventario I. This may explain why children were reported by their mothers to produce more words. Secondly, there

were significantly fewer words to choose from on the Inventario I than on the Inventario II, 428 versus 680 respectively. Therefore, Inventario II gave mothers more opportunities to report words that their child may have been producing.

Mothers reported that, on average, by the time their children were approximately 21 months they could produce a total of 140 words. The percentile rank at this data point was above 40. The range of words produced was between 13 and 419. Individual analysis of the total number of words mothers reported their children to produce revealed that the majority of children (n=11) were producing less than 100 words, five children were producing between 100 and 200 words, four were producing between 200 and 300 words, and one child was producing 419 words by the time he was 21 months.

By the time the children were approximately 24 months, their mothers reported that, on average, they could produce 202 words. The percentile rank for this data point remained relatively the same as the 21-month data point, above the 40th percentile. The range of words produced was between 47 and 527. Individual analysis of words produced at this data point revealed that seven children could produce less than 100 words, eight children could produce between 100 and 200 words, nine could produce between 200 and 300 words, and two could produce above 500 words.

A one-sample t-test was conducted to determine whether children at the 18, 21, and 24-month data point were performing as expected compared to children of their same age and gender. Results of the one sample t-test revealed that at the 18 month data point the children in this study were not performing as expected for their age and gender $t(24) = .001, p < .05$. However, by the time children were approximately 21 and 24 months of age they were performing as expected compared to their age and gender matched peers $t(20) = .31, p < .05$ and $t(25) = .24, p < .05$ respectively. Therefore, even though a month had elapsed between the Inventario I data point and the Inventario II 18-month data point, children in the study were still not performing as expected. By the time they reached the 21 and 24-month data point there was no difference found between their performance on words produced and their age and gender matched peers.

As the children in the study became older, their mothers reported that they could produce more words. Raw scores of words produced indicated that when children were approximately 18 months they could produce an average of 50 words. By the time they were approximately 24 months of age they could produce an average of over 200 words. Therefore, mothers reported that, on average, their children's expressive vocabulary (words they could say) increased by about 150 words in approximately six months. Percentile scores remained

relatively the same across all three data points. The range of words children could produce became broader as the children became older. At the 18-month data point, the reported range was between 10 and 249 words and by the time they were 24 months the average range was reported to be between 47 and 527.

Table 4

Children's Vocabulary Raw Scores and Percentile Scores at 18, 21, and 24 months from Inventario II.

	18 Months			21 Months			24 Months		
	Mean	S.D.	Range	Mean	S.D.	Range	Mean	S.D.	Range
Raw score	54.5	54.6	10-249	140.9	128.8	13-419	202.1	135.7	47-527
Percentile	35.0	20.6	12-87	43.3	29.3	5-93	44	27.7	9-92

2. How frequently were the mothers in this study being supportive versus intrusive in their maternal talk to their children?

Trends in Parenting Practices and Pragmatic Functions of Maternal Talk

The mean, standard deviation, and range for the absolute frequencies coded as supportive or intrusive during the 12-minute naturalistic play session as well as the mean proportion of each is reported in Table 5. A descriptive analysis revealed that, on average, mothers in the sample produced a total of 224 utterances. The frequency of utterances ranged from less than 100 to over 350 utterances. Individual analysis of the utterances produced by each mother in the study revealed that one mother produced less than 100 utterances, the majority of mothers ($n=23$) produced between 200 and 300 utterances, and two mothers were found to produce more than 300 utterances.

The absolute frequency of utterances coded as supportive was greater than 150, with an average proportion of more than 60%. The total frequency of utterances coded as supportive ranged from less than 100 to almost 300. A case-by-case analysis of the data revealed that three mothers produced less than 100 supportive utterances during the 12-minute session, the majority of mothers ($n=18$) produced between 100 and 200 supportive utterances, and five mothers produced greater than 200 supportive utterances.

The absolute frequency of utterances coded as intrusive was less than 70, with an average proportion of 30%. The total number of utterances coded as intrusive ranged from less than 20 to more than 100. Individual analysis of the number of intrusive utterances the mothers produced revealed that five of the mothers produced less than 50 intrusive utterances, the majority of mothers (n=18) produced between 50 and 100 intrusive utterances, and three produced between 100 and 120 intrusive utterances.

In summary, the mothers' absolute frequency and proportion of supportive utterances was inversely associated to the utterances coded as intrusive. This indicates that if the mothers were high in supportive utterances then they were low in intrusive utterances. The mothers in this study were found to be more supportive than intrusive. That is, for more than 60% of the total utterances in this 12-minute sample, mothers followed their child in play and talked about events that were occurring directly in the child's attentional focus. These results contradict findings of previous studies of monolingual English-speaking mothers who come from low SES backgrounds (Hoff, Laursen et al., 2002). Because of the inverse relation found between supportive and intrusive utterances and because mothers in this study were found to be more

supportive than intrusive, only utterances coded as supportive will be used when analyzing pragmatic functions of maternal talk.

Table 5

Frequencies and Proportions of Maternal Utterances during the 12-minute Sample Coded as Supportive versus Intrusive

Maternal utterances and parenting practices	Mean	S.D.	Range
Total raw number of maternal utterances	224.1	55.4	76-361
Supportive			
Raw number	154.9	47.0	61-292
Proportion	69.1		
Intrusive			
Raw number	69.1	27.6	15-123
Proportion	30.8		

3. *What are the frequently produced pragmatic functions of supportive and intrusive utterances of Latino mothers from low SES backgrounds?*

Table 6 reports the frequencies of the pragmatic functions of maternal talk during the 12-minute naturalistic play session. The table is arranged from most to least number of pragmatic functions during the 12-minute session. The

pragmatic function most frequently produced by mothers was Direct Commands (DCs), while the pragmatic function least produced was Indirect Commands (ICs). Detailed information of the top three pragmatic functions of maternal talk, DCs, Descriptions, and Attentional Directives (ADs), will be discussed because they include the three widest ranges of all of the pragmatic functions analyzed. A brief discussion of the remaining two pragmatic functions, Questions and ICs, follows this detailed discussion.

On average, mothers produced a total of over 55 DCs during the 12-minute session. This was the most frequently produced pragmatic function by the mothers in this study. The number of DCs ranged from less than 20 to over 150. Individual analysis revealed that one mother had produced less than 20 DCs, 13 mothers produced between 30 and 50, eight mothers produced between 50 and 100, and four of the mothers produced over 100 DCs during the 12 minute session.

Descriptions were, on average, the second most frequently produced pragmatic function by mothers during the play session. Similar to DCs, an average of 55 Descriptions were produced during the session. Unlike DCs, the range for Descriptions produced was not as broad. Table 6 reports that Descriptions ranged from more than 10 to less than 80. A case-by-case analysis

of these data revealed that two mothers produced less than 20 Descriptions, four mothers produced between 20 and 30, the majority of the mothers ($n=14$) produced between 30 and 50 Descriptions, five mothers produced between 50 and 60, and one mother produced 75 Descriptions.

Mothers also spent, on average, a fair portion of their time producing ADs. Mothers produced an average frequency of almost 30 ADs during their 12-minute interactions with their children. A case-by-case analysis of the data revealed that 8 mothers produced less than 20 ADs, the majority of the mothers ($n=12$) produced between 20 and 40, 5 of the mothers produced between 40 and 50, and one mother produced 73 ADs. The high frequency of production of ADs is surprising, considering that the mothers in this study were found to be more supportive than intrusive and previous studies have linked ADs to an intrusive characteristic of parenting (Flynn & Masur, 2007; McDonald & Pien, 1980).

Mothers in this study spent the least amount of time asking their children Questions and producing ICs. The average frequency for these pragmatic functions was less than 20. There were also similarities of range between the two functions. Although the range for Questions was broader than the range for ICs, mothers produced less than five Questions and ICs during the 12-minute naturalistic play session.

In summary, mothers spent the majority of their time telling their children what to do and describing features of the environment. They also spent a portion of their time pursuing their children's attention. These mothers spent very little time asking questions and suggesting play activities or actions. This is expected since over half of the utterances produced by the mothers were DCs.

Table 6

Frequency of Pragmatic Functions of Maternal Talk

Pragmatic functions	Mean	S.D.	Range
DC	58.8	32.6	16-160
Descriptions	40.2	14.7	15-75
AD	29.8	15.7	10-73
Questions	17.7	9.9	4-47
IC	13.0	7.3	4-38

Table 7 reports bivariate correlations of degree of supportive parenting practice and frequencies of pragmatic functions of maternal talk. Three of the five pragmatic functions of maternal talk used in this study correlated with supportive parenting practice (DCs, Descriptions, and Questions). Therefore, the focus of discussion for this table will be on these three pragmatic functions.

DCs yielded the second highest positive correlation with supportive parenting practice $r = .60$, $p < .01$, indicating that DCs was related to supportive parenting practice rather than intrusive. This finding contradicts previous studies that have investigated the relation between these two variables (Flynn & Masur, 2007; McDonald & Pien, 1980). Descriptions and Questions were also found to be positively correlated with supportiveness $r = .68$, $p < .01$ and $r = .45$, $p < .05$, respectively. These findings were expected since previous studies have found positive correlations of these pragmatic functions of maternal talk and supportiveness.

Therefore, although expected positive correlations were found among supportiveness and the two pragmatic functions of maternal talk (Descriptions and Questions) a non-expected finding was also discovered. Although the mothers in this study followed their child's focus in play, they were also telling their child what to do, a finding that contradicts the results of previous studies (Flynn & Masur, 2007; McDonald & Pien, 1980).

Table 7

Correlations of Degree of Supportive Parenting Practices and Frequency of Pragmatic Functions of Maternal Talk

Pragmatic functions	Supportive
DC	.60**
Descriptions	.68**
AD	.23
Questions	.45*
IC	.20

** $p < 0.01$, * $p < 0.05$

4. *Are there any associations between parenting practices or pragmatic functions of maternal talk and children's vocabulary development?*

Maternal Input and Vocabulary Development

Table 8 reports correlations of the absolute frequencies of vocabulary scores with supportive parenting practice and pragmatic functions of maternal talk, as children got older. Supportiveness was positively correlated with children's vocabulary score at the 18 month Words Produced (WP) Inventario I data point $r = .33$, $p < .05$. However, a stronger correlation of supportiveness and

vocabulary scores was found when children were approximately 21 months $r = .51, p < .05$.

Two of the pragmatic functions of maternal talk were correlated with vocabulary development at one or more data points (Descriptions and Questions). Therefore, the focus of discussion for this table will be on these two pragmatic functions of maternal talk. Analysis revealed that Descriptions were consistently positively correlated with vocabulary development at each data point except for the 18 month Words Comprehended (WC) Inventario I data point. The strongest correlation among Descriptions and vocabulary development occurred when children were approximately 21 months of age $r = .69, p < .01$. The weakest correlation occurred when children were approximately 18 months of age with the Inventario II $r = .40, p < .05$. However, correlations were also found at the 18 month Words Produced (WP) and the 24 month data point $r = .57, p < .01$ and $r = .45, p < .01$, respectively. This indicates that mothers who described aspects of the environment more often, had children with larger reported vocabulary.

There was significant positive correlation with vocabulary development and Questions at three of the five data points. The strongest correlations between Questions and vocabulary development occurred at the 21 and 24

month data point $r = .68, p < .01$ and $r = .54, p < .01$, respectively. The weakest correlation occurred at the 18 month WP Inventario I data point $r = .49, p < .01$.

Therefore, mothers who asked more questions when their children were approximately 18, 21, and 24 months had children with larger reported vocabulary scores.

Table 8

Correlations of Supportive Parenting Practices and Frequencies of Pragmatic Functions of Maternal Talk with Vocabulary

	18 Months	18 Months	18 Months	21 Months	24 Months
	WC Inventario I	WP Inventario I	Inventario II		
Parenting practice					
Supportive	.10	.33*	.14	.51*	.27
Pragmatic functions					
DC	-.21	-.14	-.26	.21	.08
Descriptions	.32	.57**	.40*	.69**	.45**
AD	-.33	-.05	-.06	-.12	.05
Questions	.28	.49**	.32	.68**	.54**
IC	.02	-.12	.02	-.18	-.16

** $p < 0.01$, * $p < 0.05$

Chapter V

Summary, Conclusions, and Recommendations

The purpose of this chapter is to present a brief summary of Chapters I, II, and III, provide interpretations regarding the results discussed in chapter IV, and to offer recommendations based on the data from Chapter IV.

Summary

There has been a steady increase of the Hispanic population in recent years (U.S. Census, 2007). The rise of this population has created a need to better understand the dynamics of particular cultures. More specifically, currently, a need exists to understand the parenting practices, pragmatic functions of maternal talk, and the vocabulary development of children of Latino families from low SES backgrounds. In addition, it is also important to gain knowledge of the interactions between the variables mentioned above. Previous research in this area of interest has mainly focused on monolingual English-speaking families from mid to high SES backgrounds. The purpose of this thesis was to gain further understanding of this topic by researching five main questions:

1. How does cultural background define parenting practices between the Anglo-European and the Latino population?

2. What developmental changes are observed in Latino children from 18-24 months in receptive and expressive vocabulary?
3. How frequently were the mothers in this study being supportive versus intrusive in their maternal talk to their children?
4. What are the frequently produced pragmatic functions of supportive and intrusive utterances of Latino mothers from low SES backgrounds?
5. Are there any associations between parenting practices or pragmatic functions of maternal talk and children's vocabulary development?

A review of the literature revealed that differences exist among the parenting practices of Anglo-European and Latino populations (Arcia & Johnson, 1998; Negy & Woods, 1992; Schulze et al., 2001). Researchers have found that Latino mothers have been observed to be more physically controlling than Euro-American mothers. Physical control has been measured, among other methods, by videotaping mother-child interactions and coding utterances as supportive or intrusive. However, researchers interested in these particular parenting practices have mainly focused on monolingual English-speaking families from mid or high SES backgrounds.

The trend of research has been to analyze parenting practices and its relations to interactional intent of maternal talk. A review of the literature on

this topic revealed that researchers have been interested in the characteristics of maternal talk of supportive versus intrusive parenting practices (Flynn & Masur, 2007; McDonald & Pien, 1980; Pine, 1992). These researchers have found that supportive parenting is characterized by several pragmatic functions including; the number of descriptions mothers use, number of questions mothers ask, and number of times mothers suggest to the child a particular action or activity. Conversely, intrusive parenting behavior has been linked to the number of times mothers tell the child what to do and number of times the mother directs the child's attention. However, studies focusing on these issues have either not controlled for participant's language exposure or SES (Flynn & Masur, 2007; McDonald & Pien, 1980) or have only included monolingual English-speaking participants from mid or high SES backgrounds (Hoff & Naigles, 2002; Pine, 1992; Tamis-LeMonda et al., 2001).

Maternal input (e.g., parenting practices and pragmatic functions of maternal talk), vocabulary development, and SES have also been topics of interest to researchers. Studies have found that mothers of mid to high SES backgrounds tend to have more supportive parenting behaviors and, therefore, use more descriptions, ask more questions, and use a greater number of indirect commands. Researchers interested in the vocabulary development of children

who come from these families have found that these children score high on vocabulary tests. On the other hand, mothers of low SES backgrounds demonstrate intrusive characteristics of maternal talk to their children. These mothers have been found to produce a greater number of attentional directives and direct commands. In turn researchers have found that vocabulary scores of these children are lower compared to age and gender matched peers.

The above issues on parenting practices, pragmatic functions of maternal talk, and vocabulary development have been the main focus of investigation for this thesis. To carry out this investigation, naturalistic observations of mother-child interactions were carried out. All of the families were of low SES backgrounds and Spanish was the primary language spoken in the home. The observations were first coded for supportive versus intrusive parenting practices and then by one of the six pragmatic functions: Attentional Directives, Direct Commands, Descriptions, Questions, or Others. To analyze children's vocabulary development, mothers were asked to complete the Inventario I and the Inventario II when children were approximately 18, 21, and 24 months of age.

Conclusions

The goal of this section is to interpret the results of the data analyzed in Chapter IV. Interpretation of this data will be discussed in the order that it was

analyzed in Chapter IV. Therefore, the discussion will begin with the interpretation of children's vocabulary development and will end with the interpretation of the correlations between supportive parenting practices, pragmatic functions of maternal talk, and vocabulary development.

Analysis of the words children in this study were reported to comprehend revealed that this group of Latino children from low SES backgrounds was performing below expectations to their age and gender matched peers. The participants continued to perform below expectations until approximately 21 months of age. A general trend in vocabulary development was found: as the participants became older, their mothers reported that they could produce more words.

When analyzing parenting practices, the mothers in this study were found to be, on average, more supportive than intrusive. This was evident for frequency as well as proportion of total utterances during the 12-minute naturalistic sample. Previous studies focusing on the parenting practices of mothers from low SES backgrounds have found a high level of intrusiveness rather than supportiveness in mother's parenting behavior. In this study, while mothers were intrusive 40% of the time they were supportive 60% of the time. Given these results it is difficult to say whether these mothers were truly being

“more” supportive than intrusive since previous studies have not established a baseline of level of supportiveness or intrusiveness in mothers from varying SES backgrounds and cultures.

If, however, these results are accepted, as they are (e.g., these Latino mothers of low SES backgrounds are high in supportive and low in intrusive) then a possibility of these outcomes may be that mothers in this study were performing as they thought was expected of them. Although the mothers were asked to play “as they would at home” before recording began, or shortly there after, it may be that because they found themselves in this new and strange situation it was difficult for them to interact with their children as “as they would at home.” Therefore, the supportive behavior found in this group of mothers might be the result of performing as they thought was expected of them, rather than how they would typically interact with their children.

Analysis of the pragmatic functions included in this thesis revealed that this group of mainly supportive mothers produced a high number of direct commands, a pragmatic function that has been linked to intrusive parenting behavior in previous studies (Flynn & Masur, 2007; McDonald & Pien, 1980). One possibility for these results is that it may be possible that this pragmatic function of maternal talk, which has been linked to intrusive parenting, may not

have been properly analyzed in previous studies. It may be that this pragmatic function needs to be investigated closer to determine whether mothers are producing it while the child is attending to an activity versus to direct the child from his/her current focus and onto a different activity.

Another possibility may be that this increased number of direct commands in these mainly supportive mothers could be a reflection of their true parenting behavior. It could be that although these mothers performed as they thought was expected of them, they could not truly hide the manner in which they interact with their children outside of the “testing” environment. Therefore, since direct commands have been linked to intrusive parenting practices, the high number of direct commands produced by these mothers may be a sneak peak into their true parenting behavior. However, rationalizing the results in this manner, does not explain the reason for the high number of Descriptions also produced by the mothers in this study, a pragmatic function that has been linked to supportive parenting.

Analysis of the association between vocabulary development, supportive parenting, and pragmatic functions of maternal talk revealed correlations between these variables at some data points but not others. Positive correlations were found between supportive parenting and vocabulary scores when children

were approximately 18 and 21 months of age. Associations between pragmatic functions of maternal talk and vocabulary development revealed that Descriptions and Questions were the only pragmatic functions correlated with vocabulary development. This indicates that mothers who spent more time describing aspects of the environment and asking their children questions have children who can produce more words.

An interesting finding, however, was the fact that there were no correlations with the high number of direct commands produced by mothers in this study and the children's vocabulary scores at any age. Therefore, although these mothers were found to spend a fair portion of their time telling their children what to do, it turns out that this particular pragmatic function did not help to increase their vocabulary scores.

Recommendations

The purpose of this section is to present suggestions for future studies based on the results found in this study. The discussion will include: suggestions of how professional groups may implement the results of this study as well as recommendations for modifying the current study.

The results of this study indicate that descriptions and questions are related to the vocabulary development of young Latino children from low SES

backgrounds. This implication may be useful in training professionals who work with this population. Individuals such as teachers and therapists may benefit by knowing the impact of these pragmatic functions on the vocabulary development of children. Furthermore, professionals who interact with Latino mothers from low SES backgrounds may use these results to train parents on the benefits of asking questions and describing aspects of the environment to their young children.

The current study included interactions between mothers and their young children. It may be interesting to investigate whether or not children's vocabulary scores are affected by who interacts with them. Therefore, researchers who intend to replicate this study may be interested in analyzing and comparing the utterances of other caregivers and their association with children's vocabulary development.

A second suggestion for future studies may be to include Latino mothers from mid or high SES backgrounds. By including this population, it may be possible to further understand the parenting practices of Latino mothers. In addition, it may provide information on whether or not the results on parenting practices found in this study are a reflection of the parenting behaviors that

characterizes Latino mothers or are they reflections of the parenting behaviors of mothers from low SES backgrounds.

A final suggestion for replicating this study is to observe the parent-child interactions in various contexts. Flynn and Masur (2007) found that mothers in their study displayed more intrusive parenting behaviors during bath time and more supportive parenting behaviors during playtime. Analyzing the maternal utterances of mother-child interactions in a variety of contexts may allow researchers to better understand the parenting behaviors of Latino mothers, an area that warrants further attention in the current literature.

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