PAYMON, HOLLY, M.A. Social Competence and Adaptive Learning Behaviors as Predictors of School Readiness. (2015).
Directed by Dr. Julia Mendez. 49 pp.

Preschool children can acquire language competencies through interactions with their peers as well as with their teachers. Indicators of children's social competence in the peer group and indicators of children's learning behaviors with their teachers could be important predictors of their language abilities. Relations between children's social competence with their peers, adaptive learning behaviors in the classroom, and school readiness (language abilities) were examined in a sample of 60 Latino preschool children, from low SES backgrounds, who participated in Head Start. The Expressive and Receptive One-Word Picture Vocabulary tests were used as measures of school readiness. The Penn Interactive Peer Play Scale (PIPPS) and the Preschool Learning Behaviors Scale (PLBS) were used to measure parent reported social competence and teacher reported adaptive learning behaviors, respectively. This study tested the main hypothesis that social competence would be positively associated with Latino children's school readiness outcomes. It was further hypothesized that the presence of adaptive learning behaviors would moderate this association. Hierarchical regression analyses were used to test these hypotheses. The main findings suggest that disconnection from peers is negatively associated with receptive language skills and that adaptive learning behaviors in the classroom are negatively associated with expressive language skills. Findings from this study may have implications for parents and teachers whose goal is to improve Head Start children's language competencies. Research and clinical implications will be discussed.

SOCIAL COMPETENCE AND ADAPTIVE LEARNING BEHAVIORS AS

PREDICTORS OF SCHOOL READINESS

by

Holly Paymon

A Thesis Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Arts

Greensboro
2015

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CHAPTER I

INTRODUCTION

In the United States, about one-fourth of children under the age of six years are living below the U.S. poverty line (DeNavas-Walt et al., 2012). According to a 2011 Pew Hispanic Center analysis, 23.1% of all children in the U.S. are Latino and 6.1 million Latino children, under the age of 17, live in poverty as of 2010. The population of Latino children living in poverty far exceeds that of any other demographic group (Lopez & Velasco, 2011). When compared to White (5 million) and African American (4.4 million) children living in poverty, it becomes evident that Latino children are disproportionately affected. Furthermore, the poverty rates for Latino children have risen at a steep and continuous rate since 2007 (Lopez & Velasco, 2011). In 2013, 63% of Latino children were low-income, compared to their White (29%) and Asian (32%) peers (Child Trends Databank, 2014). Programs, such as Head Start, serve increasing numbers of children from Latino households, with Latino children comprising of 38% of Head Start preschool programs' annual enrollment (Early Childhood Learning & Knowledge Center, 2014). Head Start is a federal program, servicing over one million preschool-age children from low-income families. The goal of Head Start programs is to advance school readiness skills by providing a high quality curriculum that promotes social, emotional, and cognitive development (U.S. Department of Health & Human Services, n.d.).

Much research has focused on the detrimental effects that living in poverty has on child development. Children living in poverty are more likely to encounter suboptimal living conditions, which put them at risk for cognitive, behavioral, and academic problems (Cooper et al., 2010; Engle & Black, 2008; Hilferty et al., 2010). Additionally, these early adversities are more likely to be experienced by immigrant and ethnic minority children (Fantuzzo, Mendez, & Tighe 1998; Karoly & Gonzales, 2011). These children are more likely to have emotional and behavioral difficulties and are 1.3 times more likely to exhibit developmental delays and be diagnosed with a learning disability, than their more affluent peers (Brooks-Gunn & Duncan, 1997). A study by Raver et al. (2007) found that when compared to middle- and upper-class children, poor children show significantly lower social skills at the start of school. Furthermore, without appropriate interventions, early childhood problems can have cascading effects throughout the schooling years (Duncan, Brooks-Gunn, & Klebanov, 1994; Engle & Black, 2008), with children from low-income families demonstrating higher enrollment in special education classrooms, lower academic achievements, grade retention, and early school dropouts (Smith & Brooks-Gunn, 1997 as cited by Hilferty et al., 2010). Clearly, more focus is needed on providing economically disadvantaged children with the appropriate experiences and skills needed to augment their developmental and academic trajectories. This study focused on identifying factors that are more strongly related to positive school readiness outcomes for low-income Latino children.

School Readiness

School readiness is a measure of how prepared young children are for entry into formal schooling. Disagreements in how to define and accurately assess school readiness exist among researchers (Snow, 2010). However, definitions of school readiness typically include the repertoire of children's social, cognitive, and behavioral attributes pertaining to their ability to successfully navigate and advance in school (Rafoth et al., 2004). School readiness is a nationally recognized concern. In 1990, the U.S. Department of Education created eight National Education Goals, with the first of them being that all children are "ready to learn" at the start of their schooling (National Education Goals Panel, 1999). Furthermore, the National Education Goals Panel proposed that the assessment of school readiness should include at least five domains, including health and physical development, emotional well-being and social competence, approaches to learning, communicative skills, and cognition and general knowledge (Saluja,Scott-Little, & Clifford, 1999). For the purposes of this study, school readiness outcomes were defined solely as a measure of children's language abilities as evidenced by their receptive and expressive language skills.

Language for bilingual children is a key indicator of their school readiness. School readiness during the early formative years is of particular importance because it lays the foundation for future academic performance and growth. Dual language learners from low-income households consistently demonstrate lower school readiness at the start of kindergarten (Castro et al., 2011) and experience additional demands on socio-emotional and literacy development (Gutiérrez, Zepeda, & Castro, 2010), compared to

their monolingual peers. Children who lag in emergent literacy skills, including oral language, phonological processing skills, and print knowledge, are at greater risk for prolonged emotional, academic, and/or behavioral problems (Lonigan et al., 1999). Reading and language achievement patterns, which are predominantly established between birth to 8 or 9 years of age, serve as the basis for mastering skills across most academic domains in school (Garcia & Frede, 2010). Because Latino children are coming from homes where English may not be spoken, they may be faced with a language barrier that makes the transition to school more difficult. Hammer, Jia, & Uchikoshi (2011) found that compared to simultaneous learners—children learning two languages at the same time, sequential learners—children who have no exposure to their second language (i.e. English) prior to school entry, may take longer than the span of a Head Start program to catch up to their monolingual peers in terms of vocabulary growth and auditory comprehension. By gaining a deeper understanding of what facilitates learning and language development for dual language learners, we will have a better idea of what interventions will help these children develop early academic success.

Conceptual Framework

The preschool years are a critical period for children, especially those from low-income, ethnic minority families, to develop these school readiness skills. Latino children, in particular, are faced with many hardships that put them at risk for future problems when they enter school (Cooper et al., 2010). One of the reasons for this may be because they have this language barrier that presents an additional hurdle beyond the demands that are typically associated with transitioning to school, such as forming and

maintaining friendships with others, social and academic demands, and meeting teacher expectations in the classroom.

Generally, there are two types of social interactions that occur in a preschool classroom; one is with peers and one is with teachers. It is important to understand how these relationships co-occur and what that means for school readiness. The foundation of Vygotsky's work was the idea that social relationships scaffold learning. Vygotsky introduced the zone of proximal development, which he defines as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 33). Therefore, children's peers and teachers both have the ability to guide and enhance their learning by providing the appropriate assistance that will enable them to solve tasks that they may not have been able to solve alone. At the preschool level, teachers scaffold learning in the classroom while peers scaffold learning through the medium of play. For bilingual children, who may have limited English speaking skills, understanding their development will be dependent upon understanding how they form social relationships. English language ability may not be facilitated in their home environment. So, when these children enter preschool, regardless of the language that they speak, if they have the social abilities to access their peer group and the learning behaviors to access what the teacher is offering, their development will be accelerated and they will maximize their learning. These social relationships that can form are going to give the child access to

more opportunities as these relationships will likely buffer and/or augment language development.

Bidirectionality. This study utilized a parent-report measure of children's social competence in the home and neighborhood, following the framework that dual language learners would feel more comfortable and demonstrate higher social competency skills in their home environments. Therefore, the parent-report measure was intended to capture dual language learners' true social competence potential and the repertoire of skills they may bring with them into the preschool classroom. It may be that children with greater social competency skills demonstrate better language abilities. Mendez & Fogle (2002) studied low income children attending Head Start programs and found that children with higher parent ratings of play interaction demonstrated greater receptive language skills. However, it has also been found that language ability and communication skills impact the presence (or lack thereof) of social competency skills (Howes & Matheson, 1992). This implies that there may be a bidirectional relationship between social competence and language outcomes.

Furthermore, this study is examining moderation. Moderation models involving social competence, adaptive learning behaviors, and language abilities can happen in alternate ways and only overtime can we more fully test these models. However, this study intended to get preliminary evidence on the impact of classroom learning behaviors on these constructs.

Social Competence

Social competence is a life-long developmental construct that looks differently at various developmental stages. Definitions of social competence vary among researchers. Vaughn et al. (2009) reviewed three common approaches to defining social competence. The first approach defines social competence as the specific characteristics related to the formation and maintenance of peer interactions and relationships that mirror the interests of the researcher conducting the study. The second approach has more of an emotional emphasis as it involves the antecedents and consequences of children's ability to understand feelings and emotions, both pertaining to themselves and others. The third approach encompasses children's ability to achieve social goals within particular social contexts. This study defines social competence as having appropriate and functional peer play interactions. When a child is disconnected from their peers, the child is considered to have low social competence.

During the preschool years, peer play serves as the primary pathway for the acquisition of social competency skills (Bulotsky-Shearer et al., 2010; Cohen & Mendez, 2009). Through the use of classroom observations during free time as well as a parent-rated scale assessing children's social competence and problem behaviors in preschool, Newton and Jenvey (2011) found a significant and positive relationship between social play with peers and social skills ratings. Many developmental psychologists have emphasized the importance of play for the development of social and communication skills. Piaget (1962) highlighted that it is during the context of play that children learn adaptive manners of interacting with one another as well as the ability to view situations

from another's point of view (Mendez & Fogle, 2002). Vygotsky's sociocultural theory of development indicates the importance of formative peer play experiences for scaffolding children to have appropriate learning (Mendez, Fantuzzo, & Cicchetti, 2002). Peer play is a key indicator of social competence in preschool. Interactions in the form of peer play are also conducive for improving language skills (Mendez & Fogle, 2002)

Many researchers agree on the importance of social competence for interpersonal advancements, academic success, and overall school readiness (Denham, 2006; Vaughn et. al., 2009). Denham (2006) also suggested that when children exhibit higher levels of social competency, they are more capable of establishing friendships with peers and positive relationships with teachers, have more positive attitudes about school, and demonstrate greater participation and academic success. With respect to receptive and expressive language outcomes, a study by Mendez, Fantuzzo, and Cicchetti (2002) found that African American, English speaking, Head Start children with the highest levels of play interaction scored the highest for both expressive and receptive language, whereas children who received the highest ratings of play disruption scored the lowest for both expressive and receptive language, suggesting that social competency during the preschool years influences language competencies.

Preschool Learning Behaviors

Preschool learning behaviors are the characteristics or behaviors that enable children to access information and support in an educational context (McDermott, et al., 2002). Having these learning behaviors is typically associated with better achievement outcomes. Positive preschool learning behaviors include competence motivation,

attention/persistence, and attitudes towards learning. These learning behaviors have been classified as keystone variables—variables that when changed (improved) have widespread positive consequences (Barnett et al., 1996), because they enable learning across many different school readiness domains (Dominguez et al., 2011) and promote achievement throughout schooling (Dominguez et al., 2010; Reynolds, 1991). A study by Alexander, Entwisle, & Dauber (1993) found strong effects for classroom behaviors portrayed by children and their performance at the start of first grade. In particular, interest in the subject matter, sufficient attention span, and active participation in the classroom resulted in superior advancements in test scores during the first year of school. Some teachers report that learning positive social and task-related behaviors has more potential for success than simply learning academic skills (Schaefer et. al., 2004).

Preschoolers of low-income backgrounds may be able to reduce the probability of social-emotional and academic problems while transitioning to kindergarten, simply by developing these adaptive learning behaviors, even to just a functional level, (Domínguez et. al., 2010; McDermott et al., 2011). A study by Escalón et al. (2009) found a direct relationship between adaptive learning behaviors and greater literacy and mathematics advancements over the span of one preschool year for a sample of children attending Head Start. Research has also shown an association between positive peer relationships and adaptive learning behaviors with preschool samples (Coolahan et al., 2000). Gaining a deeper understanding of the impacts of these learning behaviors is also of clinical importance because of their presumed malleability and responsiveness to interventions (Dominguez et al., 2011; Dominguez et al., 2010). As research demonstrates, these

constructs of preschool learning behaviors are associated with better learning outcomes in native populations. What is unclear, however, is if these findings will translate to Latino dual language learner children.

Present Study

The purpose of this study was to better understand the relation between social competence and school readiness outcomes within a low-income, Latino, preschool-age sample of children. Specifically, this study examined the moderating effect of learning behaviors on the relation between social competence and expressive and receptive language, while accounting for variance associated with child age. Children between 3-5 years of age develop at different rates. However, in general, it is likely that older children will have developed stronger language abilities than younger children (Ozcaliskan & Goldin-Meadow, 2010). Covarying out this variable allows us to get a better understanding of the influence of positive learning behaviors and social competence on language outcomes.

Based on the review of previous research, two hypotheses were developed for this study. First, it was hypothesized that a positive relation between social competence and school readiness outcomes will exist. Specifically, higher social competence scores would be indicative of higher scores on school readiness outcomes (i.e. stronger language ability). Second, it was hypothesized that positive learning behaviors would moderate this relationship. The idea being tested is that if children are making continual, successive attempts at the task at hand, raising their hands in class, or asking questions and seeking support from their peers, then even if these behaviors are not always understood by non-

Spanish speaking peers, there is something important happening during those interactions that facilitates learning for Latino children. In other words, this study posited that engagement in adaptive learning behaviors is not necessarily language dependent. Therefore, it was predicted that the positive association between social competence and school readiness outcomes would be stronger when adaptive learning behaviors are also present.

CHAPTER II

METHOD

Participants

The participants in this study included 60 Latino children attending Head Start (60% male). The average age of participants was 3.59 years (SD = .62, range = 3-5 years), which is consistent with the target age group for Head Start (ages 3-5). Eighty-seven percent of the children were born in the United States. Of those who were not born in the U.S., the average age at which children moved to the U.S. was 2.67 years (range = less than one year-3 years).

Data was also collected from the Head Start children's parents [91.8% female (88.4% biological or adoptive mother, 3.4% grandmother or aunt); 8.3% adoptive or step father], representing numerous countries of origin, including Ecuador (30%), Brazil (21.6%), Mexico (18.3%), Honduras (18.3%), Peru (5%), Columbia (3.3%), Guatemala (1.7%), and Puerto Rico (1.7%). Parents in this study lived in a suburban area of a major metropolitan area in the Northeast. The nativity status of the sample was that all caregivers were born outside of the U.S. Ninety-five percent of the sample reported living in the United States for 10 or fewer years, with a median length of residence in the U.S. of 6 years (range 1-20; mode = six years). The majority of the parents (55%) were married or living with a significant other, 35% were single, and 10% were divorced or separated.

Family composition consisted of a mode of two children (mean = 2.02, range = 1-4) and two adults (mean = 2.52, range 1-5).

In terms of employment status, most parents worked part-time (45%) and 23.3% worked full-time, whereas 20% were unemployed or looking for work, and 11.7% did not work outside the home. The majority of parents (83.3%) did not attend school in the United States. Of the six parents who reported attending school in the United States, one completed 9th grade, two earned a high school diploma or GED, one completed some college, and two completed job training or vocational school. Overall, parent reported perceived English language competence averaged between "not at all" and "a little" (mean = 1.82, range = 1 "not at all" to 4 "extremely well"). The parents' mean reported monthly income was $984.35 (n = 46, range = $0-2,400).

Teacher data was collected from 16 teachers. The mean number of years of early childhood teaching experience was 14.88 years (range: 2-28 years). The average number of years teaching with Head Start was 7.82 years (range 1-28 years) and the majority of respondents (86.7%) were head teachers. Seven of the teachers had some college experience or earned an associated degree, eight had a Bachelor's degree, and one had a graduate degree. Six of the teachers (37.5%) were concurrently enrolled in other courses or workshops to enhance their education and skills. Although some of the teachers were Latino and reported speaking some Spanish to the children, the majority of teachers were White and non-Spanish speakers.

Measures

      Preschool Learning Behaviors Scale. The PLBS (McDermott, et al., 2002) was

normed with 100 preschool aged children (50% female) between the ages of 36-66

months (20 children from each 6-month age interval) from a total of 139 preschool and

daycare programs in the United States. The PLBS has 29 items, each presenting a specific

learning-related behavior. The teacher is required to indicate the frequency of the child's

typical preschool behavior on a 0-2 scale (Most often applies = 2, Sometimes applies = 1,

or Does not apply = 0), over the past 2 months. The valence (positive or negative) of item

wording on the PLBS varies to reduce response sets. Item content conforms closely to the

Learning Behavior Scale (LBS; McDermott, 1999), with wording altered to reflect less

formal learning contexts (e.g., "activities" vs. "tasks"). McDermott et al. (2012)

established evidence of external validity by examining the relationships between the

PLBS subscales and the LBS subscales as well as with future academic performance

measured by report cards (see McDermott et al. 2012 for data table of correlations). In

general, content focuses on attentiveness, responses to novelty and correction, observed

problem solving strategy, flexibility, reflectivity, initiative, self-direction, and

cooperative learning.

      Factor analyses yielded three distinct and reliable dimensions on the PLBS;

competence motivation (α = .85), attention/persistence (α = .83), and attitudes towards

learning (α = .75); total score (α = .88) (McDermott, Leigh, & Perry, 2002). Competence

motivation is a child's tendency to choose challenging tasks, work independently at tasks,

and show positive affect in relation to tasks. Attention/persistence is the child's ability to

focus on tasks, resist distractions, and persist appropriately. Attitudes towards learning include the child's ability to tolerate frustration, cooperate, and accept help when needed. This study utilized the PLBS total score in the data analysis. Bivariate correlations of the PLBS subscales yielded significant positive correlations between each of the subscales. Motivation was significantly correlated with persistence (r = .73, p < .01), attitude (r = .67, p < .01), and the PLBS total score (r = .92, p < .01). Persistence was further correlated with attitude (r = .76, p < .01) and the PLBS total score (r = .92, p < .01). Finally, attitude was correlated with the PLBS total score (r = .86, p < .01). A reliability analysis of the PLBS subscales yielded a Cronbach's alpha of .78 for motivation, .84 for persistence, .70 for attitude, and .88 for the total score.

Penn Interactive Peer Play Scale. The PIPPS (Fantuzzo et al., 1998) was developed and validated with low income African American parents, but has also been validated and used with preschool Latino children (Castro, Mendez, & Fantuzzo, 2002). The parent-report measure is a 32-item scale of children's play at home and in the neighborhood. The PIPPS is rated on a 4-point Likert-format scale ("never = 1, seldom = 2, often = 3, always = 4"). Factor analyses found three reliable dimensions, including Play Interaction (α = .87), Play Disruption (α = .88), and Play Disconnection (α = .83) (Castro et al., 2002). The play interaction subscale captures children's play behaviors that facilitate prosocial peer interactions, such as cooperation. The play disruption subscale captures children's aggressive or antisocial play behaviors. The play disconnection subscale captures children's withdrawn behaviors that impede their social interaction with peers. Castro et al. (2002) also found support for concurrent validity with their

findings of correlations between the PIPPS factors and teacher-rated Social Skills Rating

Scale (SSRS). Results indicated that scores on the Play Interaction subscale were not

related to teacher-reported problem behaviors. Researchers identified positive

correlations between the SSRS Externalizing Scale and Play Disruption ($r = .52$; $p < .01$)

and Play Disconnection ($r = .28$; $p < .01$) as well as between the SSRS Internalizing Scale

and Play Disconnection ($r = .39$; $p < .01$) and Play Disruption ($r = .31$; $p < .0$). For this

study, the Play Interaction and Play Disconnection subscales of the PIPPS will be used as

separate indicators of peer play competence and withdrawn social behavior (low social

competence).

Receptive One-Word Picture Vocabulary Test Spanish-Bilingual Edition

(ROWPVT-SBE). The ROWPVT-SBE (Brownell, 2001) is a norm-referenced

assessment of a child's ability to understand single words, presented either in Spanish or

English. Children are tasked with matching the corresponding word to the picture shown.

The measure is normed for children between 4 and 12 years of age, based on a national

sample of 1,050 Spanish-bilingual children in the United States, from demographics

similar to those of the U.S. Hispanic population. At least some knowledge of Spanish was

required for inclusion into the original norming sample. Data analysis for this study used

raw scores given that some of the children had not yet turned four years old. Internal

consistency reliability for preschoolers (4-5 years of age) was high (Cronbach's alpha =

.96-.97).

Expressive One-Word Picture Vocabulary Test Spanish-Bilingual Edition

(EOWPVT-SBE). The EOWPVT-SBE (Brownell, 2001) is a norm-referenced

assessment of a child's ability to generate words, in either English or Spanish, based on the pictures they are shown. The test continues until the child answers six consecutive questions incorrectly. The measure is normed for children between 4 and 12 years of age, based on a national sample of 1,050 Spanish-bilingual children in the United States, from demographics similar to those of the U.S. Hispanic population. At least some knowledge of Spanish was required for inclusion into the original norming sample. Data analysis for this study used raw scores given that some of the children had not yet turned four years old. Internal consistency reliability for preschoolers (4-5 years of age) was high (Cronbach's alpha = .92-.93). Thirty-five percent of the children in this sample responded to this measure predominantly in Spanish, forty-two percent responded predominantly in English, and twenty-three percent responded in mixed Spanish and English. A child was classified in a predominant Spanish or English language category if they gave responses in that language greater than 70% of the time. Any child that responded between 31-69% in both languages was classified into the mixed language group. The 20% of children in the sample from Brazilian families responded to the expressive language measure in English, with the exception of one item response for a word that was the same in Spanish and Portuguese.

Procedures

This study was conducted in partnership with a community action agency offering Head Start services in accordance with approvals from the university IRB. The study procedures were also approved by the Head Start parent policy council and the agency director. Multiple recruitment strategies were used including speaking at parent

orientation sessions, attending monthly parent meetings, sending home information in both English and Spanish, asking the school staff and prior parent participants for referrals to the program, and meeting with all school staff. Parents were eligible for the study if they had a child who was classified as a dual language learner (e.g. another language was spoken in the home). There were dual language learners in each of the Head Start classrooms included in this study, but they were not the majority of students in any classroom. All Head Start classrooms were located outside a major urban center. The study was conducted over a three year period from 2007-2010. The data for this study were collected prior to parental participation in a 12 week long parent involvement intervention program held at Head Start. This study utilized data collected from children enrolled in the same class, beginning in early September, for 6-7 hours per day. Data was collected during either the month of October or February of the same academic year.

For interested parents, study facilitators presented parents with written information, in both Spanish and English, about the study and consent forms. A bilingual research assistant explained project goals and objectives to the parents and read consent forms orally. Parents completed self-report measures via individual standardized interviews that were conducted in person or by telephone, with a trained bilingual interviewer, who had no contact with parents enrolled in the classes. The interview was conducted with the child's primary caregiver, who received a $30 gift card for participating in each assessment.

All child assessments were administered at the Head Start centers and took approximately 30 minutes to complete. Native bilingual speakers of Spanish were trained

to use these vocabulary instruments. Teachers also completed consent forms prior to completing questionnaires. Their ratings of child behavior were collected concurrent with the data collection from family members. Teachers were compensated $15 for each child packet completed.

CHAPTER III

DATA ANALYSIS

Hierarchical regression analyses were used to test the main hypotheses, with the significant demographic covariate entered at step 1, social competence entered at step 2 (main effect), learning behaviors entered at step 3 (moderator), and the interaction term (social competence * learning behaviors) entered at step 4 to examine the moderated effects over and above the main effects. The interaction term was created from the product of the moderator variable and the independent variable (social competence subscale measure). Each regression was run separately for the Receptive one-word picture vocabulary outcome measure and the Expressive one-word picture vocabulary outcome measure. This yielded four regression models; two using the Play Interaction subscale and two using the Play Disconnection subscale, to predict either receptive or expressive language outcomes

CHAPTER IV

RESULTS

Bivariate correlations, means, and standard deviations among all predictor, control, and outcome variables are reported in Table 1. Overall, the sample displayed greater receptive language abilities (M = 28.37, SD = 16.93) than expressive language abilities (M = 18.43, SD = 12.14), which is consistent with what previous research has found for dual language learners as well as what is expected for the typical progression of language abilities in children (U.S. Department of Health and Human Services, 2003). Age was positively correlated with both expressive (r = .414) and receptive (r = .578) language, and was therefore entered into the regression models as a control variable.

Play Interaction and Learning Behaviors Models

Table 2 reports the standardized coefficients and ΔR^2 for the hierarchical linear regressions examining play interaction and learning behaviors on expressive and receptive language outcomes. Age was a significant predictor of expressive and receptive language at each step of these regression models. Once age was entered into the models at step 1, the social competence measure (play interaction) was entered into the model at step 2. Contrary to the hypothesis, play interaction was not significant for either model. The learning behaviors variable (PLBS total score) was entered in at step 3 and significantly predicted additional variance in expressive language ($\Delta R^2 = .056$, $F_{(3, 54)} =$

6.691, $p < .05$), but not receptive language. Furthermore, the PLBS was significantly

associated with expressive language in the play interaction model ($\beta = -.240$, $p < .05$), but

was not associated with receptive language. Finally, the interaction term (PLBS x Play

Interaction) was entered in at step 4, but was not significantly associated with expressive

or receptive language, nor did it predict additional variance in either model. Only the

PLBS ($\beta = -1.256$, $p < .05$) for the play interaction regressed on expressive language

model remained significant once the interaction term was added to the model.

Play Disconnection and Learning Behaviors Models

Table 3 reports the standardized coefficients and ΔR^2 for the hierarchical linear

regressions examining play disconnection and learning behaviors on expressive and

receptive language outcomes. Age was a significant predictor of expressive and receptive

language at each step of these regression models. Once age was entered into the models

at step 1, the social competence measure (play disconnection) was entered into the model

at step 2. Play disconnection ($\beta = -.225$, $p < .05$) was significantly associated with

receptive language, but not expressive language. Play disconnection also significantly

predicted additional variance in receptive language ($\Delta R^2 = .05$, $F_{(2, 55)} = 17.11$, $p < .05$),

but not expressive language. The learning behaviors variable (PLBS total score) was

entered in at step 3 and significantly predicted additional variance in expressive language

($\Delta R^2 = .060$, $F_{(3, 54)} = 6.553$, $p < .05$), but not receptive language. PLBS was significantly

associated with expressive language in the play disconnection model ($\beta = -.247$, $p < .05$),

but was not associated with receptive language. Furthermore, when PLBS was entered

into the model, the association between play disconnection and receptive language was

no longer significant. Finally, the interaction term (PLBS x Play Disconnection) was entered in at step 4, but was not significantly associated with expressive or receptive language, nor did it predict additional variance in either model.

CHAPTER V

DISCUSSION

This study aimed to understand the relations between social competence, adaptive learning behaviors, and school readiness (language) outcomes for Latino preschool children in Head Start centers. Contrary to the hypothesis, parent reports of children's social competence alone did not significantly predict expressive or receptive language outcomes. However parent reports of disconnection, or social withdrawal from play with peers, did significantly predict receptive language skills. For receptive language, disconnection was significant, in the expected direction, such that as disconnection increases, receptive language decreases. Children who exhibit more withdrawn behaviors from their peers demonstrate lower receptive language abilities. Previous research studies have shown the reverse to be true as well; children are more likely to demonstrate social competence with their peers when they have better developed communication skills (Mendez et. al., 2002; U.S. Department of Health and Human Services, 2003). Additionally, Mashburn et al. (2009) found that the expressive and receptive language development of children is positively influenced by the expressive language capabilities of their peers. Children with limited peer interactions have less opportunity for exposure to novel words. It may be that these children aren't being exposed to as much language

because they aren't interacting and conversing as much with their peers. It could also be that these children appear less involved because they do not understand conversations with their peers and therefore, naturally disengage and elect to play on their own. This puts these children at a disadvantage because within the preschool classroom, more advanced peers, in terms of social development, communication skills, and vocabulary, can encourage skill development for other children (Henry & Rickman, 2007).

Results indicate a main effect of learning behaviors on expressive language skills. Learning behaviors were significant such that as learning behaviors increased, expressive language decreased. Teachers indicated that children who have more adaptive learning behaviors have less expressive language abilities. The PLBS total score was a combined score from items spanning the three dimensions; competence motivation, attention/persistence, and attitudes towards learning. The competence motivation dimension consists of items pertaining to a child's tendency to choose challenging tasks, work independently at tasks, and show positive affect in relation to tasks. Attention/persistence items include a child's ability to focus on tasks, resist distractions, and persist appropriately. Items on the attitudes towards learning dimension center around the child's ability to tolerate frustration, cooperate, and accept help when needed. Most adaptive learning behaviors do not require expressive language ability. It could be that these children are appearing more engaged because they have less well developed expressive language skills, which require them to focus more on their interactions with teachers. Children with less developed expressive language abilities may rely more on teachers, leading teachers to pay more attention to their efforts in the classroom and

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perceive more adaptive learning behaviors. Though the language component may not be as well developed, the attention, motivation, and appropriate attitudes are in place, which sets the stage for teachers to play a vital role in scaffolding children's language skills.

Children who have an established closeness and attachment with their teachers are more apt to solicit and receive superior teaching and feedback approaches to language development from their teachers (Split, Koomen, & Harrison, 2015). In a longitudinal study examining factors contributing to language and literacy development, Dickinson & Tabors (2002) found that the quality of the teacher-child relationship during the preschool years had a much greater impact on these language and literacy gains than the classroom environment (i.e. classroom organization as well as curriculum). Additionally, these gains, as evidenced by greater receptive vocabulary, narrative production, and emergent literacy scores in kindergarten, were indicative of more advanced receptive vocabulary and reading comprehension abilities when assessed in fourth and seventh grade. Therefore, children's level of comfort and trust with their teacher likely influences the quality of their relationship and efforts that children are putting forth in the classroom. This relationship may be especially important for dual language learners who might need to rely more on their teachers until their expressive language skills are further developed. Preschool teachers are an important source of resiliency for children, especially those from at-risk populations, and can foster adaptive learning behaviors and language competence among dual language learners in the classroom by understanding each child's zone of proximal development in efforts to capitalize and build upon children's strengths in a manner that best stimulates their learning.

Child age was a significant predictor of both expressive and receptive language. Consistent with the literature, age predicted both expressive and receptive language such that as children get older, they have stronger language abilities. This study validates this finding for Latino dual language learners in preschool, which is an important contribution to current literature because it supports that these measures could be valid for measuring language abilities for dual language learners in Head Start and that they are sensitive to age-related change. However, the finding that the Brazilian subgroup of children in this sample answered the expressive language measure primarily in English suggests that we need to more deeply explore this population of children and be careful to consider within group differences among Latino American origin samples. These measures may also be used to monitor children's progress in language acquisition during the preschool years. Allman (2005) found that bilingual children do not experience receptive or expressive delays in vocabulary development, though it may appear so if their language abilities are assessed in only one language. Thus, it is critical to assess bilingual children in both languages in order to capture the most accurate picture of their total acquired vocabulary (Allman, 2005) and overall language development. Additionally, in this study, the Expressive and Receptive One Word Picture Vocabulary Tests-Spanish Bilingual Edition measures were used with children under the age of four and were found to be valuable, despite not being able to use norms[1] for those children. This suggests that these measures may be valid for younger populations and should be examined in future research.

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[1] Norms were for bilingual children 48 months or older. This study utilized expressive and receptive one-word picture vocabulary raw scores given some of the children had not yet turned four years old.

Limitations and Future Research

This study is limited by its small sample size, which, combined with a restricted variance, makes it more difficult to detect interaction effects. Covarying out age may have taken up much of the variance in the outcome measures, receptive language in particular. Having a greater sample size may contribute to additional findings. For example, when disconnection was regressed on receptive language, disconnection was significant with only age in the model. However, when PLBS was added to the model, disconnection was only approaching significance. With a larger sample, we could better test the interaction effect of social competence and learning behaviors and determine whether children who are disconnected from their peers are more likely to seek out teacher contact and therefore exhibit greater adaptive learning behaviors.

This study also highlights the need for observational studies examining the salient features of Head Start classrooms, particularly with respect to teacher's roles in promoting language competencies for dual language learners. For example, it could be that teachers are unconsciously reinforcing nonverbal behaviors and/or not actively enforcing or encouraging children's use of language to convey their thoughts, wants, or needs. Observational studies would allow examiners to pick up on the nuances of children's daily interactions with their peers and teachers and pinpoint potential areas of intervention for improving language skills. For example, Dobbs-Oates et al. (2011) used the Classroom Assessment Scoring System-Pre-K (CLASS), an observational tool focused on three domains (emotional support, classroom organization, and instructional support) of teacher-child interactions within preschool classrooms, and found that when

teachers are able to provide a well-structured classroom and demonstrate proactive responses to misbehaviors, then the children with greater orientation to tasks also exhibit greater gains in receptive language and emergent literacy skills. Furthermore, in a nationally representative sample of 2,983 pre-kindergarten children, Downer et al. (2012) demonstrated the applicability of the three-factor CLASS measure for use with Latinos and dual language learners in preschool classrooms as well as its predictive value for greater developmental outcomes (i.e. social competence, math, language/literacy) within this population.

Future research examining how the language environment in preschool classrooms relates to children's learning behaviors and language development is also warranted. Diverse samples of Head Start teachers were included in this study. While teacher instruction was provided in English only, teachers were not prohibited from speaking in Spanish. Researchers should explore language outcomes for children in classrooms with teachers who speak their same language as opposed to classrooms with teachers who do not. Future studies should more closely consider how bilingual and monolingual teachers may promote language development and learning behaviors differently.

This study utilized the PLBS total score in analyses. While this provided novel information for the application of this measure with preschool Latino children, future work should examine the relations between the individual dimensions of the PLBS (attention/persistence, competence motivation, and attention) and social competence to better unpack the underlying mechanisms contributing to the development of receptive

and expressive language skills. It may be that dual language learners who score high on the attention/persistence domain do even better on language outcomes because they are focused on the teacher and trying to learn in an English-only instructional environment. Dual language learners who score high in the motivation domain may be more likely to initiate interactions with peers even if it is difficult to communicate with one another. It could be that these children demonstrate greater language growth over time due to the motivation to engage with peers, despite challenges, and the resulting increase in natural opportunities for language practice with their peers. Dual language learners with good attitudes toward learning may be better able to establish closer relationships with their teachers, which may translate to higher quality teaching and greater efforts for teachers to scaffold learning and facilitate conversations with and among peers, all contributing to greater language development for preschool children. Finally, future research should focus on understanding how to better train teachers to foster learning behaviors in the classroom, recognize engagement from children with limited English proficiency, and encourage children to ask for help when they have difficulty communicating with their peers or teachers.

Implications for Early Childhood Practice

A unique implication of this study could be the use of these measures as a screening procedure for Head Start children. These measures could detect age based changes in preschool children's language development as well as assess their learning behaviors in the classroom. Using these measures for screening Head Start children, may

help us identify at-risk children and allow teachers the opportunity to intervene early in efforts to promote the development of school readiness skills.

It is clear that teachers play a critical role in the development of children's language competencies during the preschool years. If teachers are implicitly reinforcing nonverbal behaviors of children or not expecting them to talk in the classroom, then there could be a cost to children's language acquisition. Reading to children and then talking to them about the stories can make reading more fun while enhancing vocabulary development and comprehension skills (U.S. Department of Health and Human Services, 2003). Teachers need to identify each child's zone of proximal development and use that child's strengths to scaffold learning and language development in the classroom. Girolametto & Weitzman (2002) reported that children's language productivity is best supported when teachers employ a multitude of strategies when conversing with children, such as following the child's lead, extending conversations, asking questions, and encouraging turn taking. Additionally, if children are disconnecting from their peers due to an inability to communicate in the same language, then they are not learning how to interact with one another. If teachers are not scaffolding these peer interactions, then children may be missing important opportunities for natural language exposure and vocabulary growth through pretend play interactions with their peers. A key method of teacher involvement is teacher talk, or the usage of recasting, repeating, expanding, questioning, or prompting techniques, when joining in with peer play in efforts to help facilitate peer interactions and stimulate language growth (Stanton-Chapman & Hadden, 2011). Findings from this study emphasize the importance of promoting professional

development around how to scaffold learning and create social opportunities for language minority children in preschool classrooms as well as the need for future research studies to further study these potential interventions.

CHAPTER VI

CONCLUSION

This study expands current literature by examining social competence, language skills, and adaptive learning behaviors constructs within a low-income sample of preschool Latino children. Findings highlight the importance of teachers in Head Start for scaffolding learning in the classroom and facilitating peer interactions so that peers can scaffold vocabulary and language development with one another through the medium of play. Given the importance of developing language competencies for not only school-related tasks, but also for maintaining social relationships, future research should continue examining the underlying mechanisms at play for Latino children's school readiness as well as how high quality classroom interventions can promote language competencies.

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TABLE 1: SUMMARY OF CORRELATIONS, MEANS, AND STANDARD DEVIATIONS

Variable	1	2	3	4	5	6
1. Child's age	-					
2. PLBS Total	-.050	-				
3. ROWPVT	.578**	-.161	-			
4. EOWPVT	.414**	-.281*	.620**	-		
5. Interactp1	.150	.114	-.107	-.146	-	
6. Disconnectp1	-.125	.145	-.288*	-.235	-.118	-
Mean	3.59	39.48	28.37	18.43	23.57	14.80
Std. Deviation	.62	6.81	16.93	12.14	4.59	3.46

*Note: *p < .05, **p < .01*

APPENDIX B

TABLE 2: HIERARCHICAL LINEAR REGRESSION OF PLAY INTERACTION ON EXPRESSIVE AND RECEPTIVE LANGUAGE

	Expressive Language		Receptive Language	
	ΔR^2	β	ΔR^2	β
Step 1	**.171*****		**.334*****	
Child's Age		**.414*****		**.578*****
Step 2	.044		.037	
Child's Age		**.446*****		**.607*****
Play Interaction		-.212		-.195
Step 3	**.056***		.010	
Child's Age		**.428*****		**.599*****
Play Interaction		-.174		-.179
Learning Behaviors (PLBS total score)		**-.240***		-.102
Step 4	.036		.001	
Child's Age		**.374****		**.606*****
Play Interaction		-1.386		-.035
Learning Behaviors (PLBS total score)		**-1.256***		.018
Play Interaction x Learning Behaviors		1.708		-.202

*Note: *$p < .05$, **$p < .01$, ***$p < .001$. N = 60.*

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TABLE 3: HIERARCHICAL LINEAR REGRESSION OF PLAY DISCONNECTION ON EXPRESSIVE AND RECEPTIVE LANGUAGE

	Expressive Language		Receptive Language	
	ΔR^2	β	ΔR^2	β
Step 1	.171***		.334***	
Child's Age		.414***		.578***
Step 2	.036		.050*	
Child's Age		.390**		.550***
Play Disconnection		-.191		-.225*
Step 3	.060*		.010	
Child's Age		.381**		.546***
Play Disconnection		-.160		-.212[+]
Learning Behaviors (PLBS total score)		-.247*		-.103
Step 4	.000		.005	
Child's Age		.382**		.552***
Play Disconnection		-.113		.152
Learning Behaviors (PLBS total score)		-.212		.167
Play Disconnection x Learning Behaviors		-.062		-.486

Note: $*p < .05$, $**p < .01$, $***p < .001$, [+] $p < .1$. N = 60