EXAMINING THE SOCIAL VALIDITY OF A CAREGIVER-IMPLEMENTED

NATURALISTIC COMMUNICATION INTERVENTION ADAPTED FOR LATINX

CAREGIVERS AND THEIR CHILDREN

by

SHAUNDRA MENDEZ

A THESIS

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Student: Shaundra Mendez

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Lauren Cycyk, PhD	Chair
Stephanie De Anda, PhD	Member
Heather Moore, PhD	Member

and

Janet Woodruff-Borden	Vice Provost and Dean of the Graduate School

Original approval signatures are on file with the University of Oregon Graduate School.

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THESIS ABSTRACT

Shaundra Mendez

Master of Arts

Department of Special Education and Clinical Sciences

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Title: Examining the Social Validity of a Caregiver-Implemented Naturalistic Communication Intervention Adapted for Latinx Caregivers and their Children

This thesis examines whether the goals, procedures, and outcomes of an adapted caregiver-implemented naturalistic communication intervention (CI-NCI) were socially valid for use with Latinx caregivers of Mexican descent living in the Pacific Northwestern United States. Existing literature provides strong evidence for use of CI-NCIs with white, Anglo-American caregivers; however, limited evidence exists as to whether CI-NCIs are socially valid when used with Latinx caregivers. The intervention described in this paper was culturally and linguistically adapted for young children with language disorders from low-income, Mexican immigrants (N = 8). Social validity was measured across multiple data sources, including participant attendance, caregiver interviews, field notes, caregiver satisfaction surveys, and a post-intervention focus group. The results suggested that the participants' perspectives and beliefs aligned with the intervention goals, procedures, and outcomes of the adapted CI-NCI. Potential adaptations for future iterations of the intervention are suggested in order to enhance the social validity of CI-NCIs.

CURRICULUM VITAE

NAME OF AUTHOR: Shaundra Mendez

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene

DEGREES AWARDED:

Master of Arts, Communication Disorders and Sciences, 2019, University of Oregon
Bachelor of Arts, Communication Disorders and Sciences, 2017, University of Oregon

AREAS OF SPECIAL INTEREST:

Bilingual Speech-Language Pathology
Early Intervention

PROFESSIONAL EXPERIENCE:

Speech-language pathology intern, Jewett Elementary School, Central Point, Oregon, 2019

Speech-language pathology intern, Rogue Regional Hospital, Medford, Oregon, 2019

Preschool Teaching Assistant, Co-op Daycare, Eugene, Oregon, 2016-2018

GRANTS, AWARDS, AND HONORS:

Project INICIO Scholar, Communication Disorders and Sciences, 2018-2019

Staton Scholar, University of Oregon, 2014-2017

Summit Scholar, University of Oregon, 2014-2017

For my mother, Angela, who instilled a love of knowledge in me from day one, and who taught me the determination to finish what I start.

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CHAPTER I
INTRODUCTION

The US Census Bureau predicts that by 2020, less than half of children born in the United States will be non-Hispanic white (US Census Bureau, 2018). This suggests that in the next year, more than half of families served by early intervention professionals will be culturally and/or linguistically diverse. Of the culturally and linguistically diverse populations served in Early Intervention, the Latinx[1] population is the largest growing demographic. From 2017-2018, the United States Department of Education reported that 27% of the children served under Part-C of the Individuals with Disabilities Education Act (IDEA, 2004) were identified as Latinx (U.S. Department of Education, 2018). While over 90% of Latinx children are born in the United States, more than half of Latinx children have at least one foreign-born caregiver, suggesting that many will be exposed to both Spanish and English (Murphy, Guzman, & Torrez, 2014). Communication disorders make up the largest disability group served in Early Intervention, and practitioners can expect that many of the children they serve will come from Latinx families who use Spanish in the home (Hebbeler et al., 2007).

Early interventionists and other professionals in special education are trained to use available research to determine what communication intervention would best serve their clients and families. Caregiver-implemented naturalistic language interventions (CI-NCIs) are among the most effective, and have a large body of evidence when implemented with children under five years old with communication disorders (Roberts & Kaiser, 2011). When caregivers are trained in implementing naturalistic communication intervention strategies, there are more daily opportunities for children to

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[1] The author of this thesis has chosen to use the term "Latinx" as a gender inclusive alternative to Latino or Latina

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be exposed to quality language input (Moore, Barton & Chironis, 2014) and the child is able to learn new skills in the contexts of her/his every day environment (Moore et al., 2014; Roberts & Kaiser, 2011). However, participants in studies determining the effectiveness of CI-NCIs for young children generally identify as monolingual English-speaking, Anglo-American, and upper-middle class (e.g. Bharti & Bharti, 2010; Hemmeter & Kaiser, 1994; Meadan, Angell, Stoner & Daczewitz, 2014; Roberts & Kaiser, 2011; Weitzman, 2013).

Professionals tasked with providing intervention services to the growing demographic of Latinx children and families must look to available research to determine what approach(es) would be most appropriate to use. One might be tempted to look at the evidence available for caregiver-implemented language interventions and assume that they will be effective for all families. However, Latinx caregivers may have differences in cultural values (Kumerrer & Lopez-Reyna, 2007; Méndez-Perez, 2000), child-rearing practices (Cycyk & Hammer, 2018; Kumerrer & Lopez-Reyna, 2007), and expectations for participating in early intervention (Méndez-Perez, 2000). Before asking a family to follow a program, an interventionist must determine whether the approach is socially valid, or aligns with the family's goals, beliefs, and priorities (Strain, Barton, & Dunlap, 2012; Wolf, 1978). Caregiver-implemented intervention is commonly put into practice; however, the literature on whether these interventions align child-rearing practices, goals, and priorities of Latinx families is sparse. The purpose of this thesis is to determine if there is evidence of social validity to the goals, procedures, and outcomes of a caregiver-implemented intervention adapted for use with Latinx caregivers.

Naturalistic Communication Interventions (NCIs)

Naturalistic Communication Intervention (NCI) is an umbrella term for interaction-focused interventions to support early language development. The concept of "naturalistic communication" first appeared in early intervention practice in the 1990s, and its use represented a shift in the style of early interventionists where more focus was placed on the child's interests and environment, compared to a more traditional, clinician-directed approach (Warren, Yoder, & Dolan,1997). Some examples of evidence-based programs involving the teaching of NCIs are Milieu Teaching (Roberts & Kaiser, 2015), Enhanced Milieu Teaching (EMT) (Hemmeter & Kaiser, 1994), JASPER (Shire et al., 2019), the Hanen program (Weitzman, 2013), and Focused Stimulation (Lederer, 2002). These programs teach ommunication-enhancing strategies based on the principles such as following the child's interest (Gainey & Falcomata, 2013), arranging the environment to increase child communication (Moore et al., 2014), and enhancing caregiver responses (Haebig, McDuffie, & Weismer, 2013).

Caregiver-implemented NCIs (CI-NCIs) are a subgroup of NCIs where the child's caregiver is the main implementor of the intevrnetion. CI-NCIs ahve been shown to benefit children's communication skills and caregiver behavior for supporting communicative development (Roberts & Kaiser, 2011). The child outcomes generally expected from CI-NCIs may include increased vocabulary and mean length of utterance (Roberts & Kaiser, 2011; Vu, Hustedt, Pinder & Han, 2015), frequency of communicative events (Vu et al., 2015), or increased social communication (Meaden et al., 2014). Caregivers can also be expected to have positive outcomes in terms of knowledge of child development and responding to child with increased use of communication enhancing strategies (Haebig et al., 2013; Moore et al., 2014). The

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populations included thus far in meta analyses and studies on CI-NCIs generally consist of English-speaking middle-class caregivers and their children. Thus, a limitation to the evidence is whether these same outcomes apply to culturally- and linguistically-diverse caregivers and their children (Roberts & Kaiser, 2011).

Cultural Differences in Caregiver-Child Communication

Early intervention and early childhood special education (EI-ECSE) practices are mandated under Part C of the Individuals with Disabilities Education Act (IDEA) to be "family centered" (IDEA, 2004). While this wording can be interpreted several different ways, the American Speech and Hearing Association (ASHA) considers providing culturally- and linguistically-responsive interventions to families a necessary aspect of making therapy family centered (American Speech and Hearing Association [ASHA], 2004). Due to the changing demographics in EI-ECSE caseloads, Latinx families have been a growing topic of interest to researchers in EI-ECSE, and a few key studies have given us insight into the cultural differences of Latinx families as compared to Anglo-American populations including in linguistic needs (Méndez-Perez, 2000; Kummerer & Lopez-Reyna, 2007), differences in expectations for child's development (Méndez-Perez 2000; Kummerer & Lopez-Reyna, 2007), parenting practices (Cycyk & Hammer, 2018), and caregiver-child communication styles (Tamis-LeMonda, Song, Leavell, Kahana-Kalman, & Yoshikawa, 2012) The following section reviews some common principles of NCIs and how the perspectives of Latinx families may affect the acceptability of each intervention component.

Expectations for expressive communication. Early interventionists expect children to produce their first words by 12 months of age. However, a caregiver who is

Latinx may feel that her/his 30-month-old child is not yet ready to begin talking (Méndez-Perez, 2000). If this caregiver was presented with an intervention specifically aimed at increasing expressive communication, she may not find the intervention's goals valuable or important for that child's age and developmental stage. Considering early language intervention happens ages birth to three, an interventionist may find themselves providing intervention for a family who is not concerned when their 30-36 month old child has not started to speak. This information is strongly related to whether a parent may perceive an intervention as useful and/or in alignment with their goals, as increasing expressive communication may not be a priority to the family if they feel the child is not expected to be speaking yet (Méndez-Perez 2000).

Parent-child interaction style. The goals of NCIs generally include the child initiating communication with the adult. The expectation in many Latinx households is that adults speak first and children need to listen. This involves the caregiver using "regulatory language" or giving the child directions (Cycyk & Huerta, under review). If a caregiver uses more regulatory language and values the child's ability to follow directions, she may not feel comfortable with popular NCI strategies that involve following the child's lead (Tamis-LeMonda et al., 2012) or balanced turn-taking. The goal of NCIs is to teach the caregivers to change their communication style to meet the needs of the child, which may be challenging for a caregiver who feels that a child is not an appropriate or equal conversation partner for an adult.

Role of the caregiver. In CI-NCIs, the caregiver is the main "teacher", or implementer of the intervention. Some Latinx caregivers believe that language was learned through passive observation of others' social interactions, as well as through

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communicating with non-primary family members, particularly with other children, older siblings, and grand caregivers (Perez, 2000). However, other Latinx caregivers do consider themselves responsible for communication development at young ages (Cycyk & Hammer, 2018), suggesting that this may vary among Latinx families. If the caregiver does not perceive her/himself as an influence on the child's language development, she/he may not implement strategies that involve her/him teaching the child new language. Additionally, the interventionist may consider family members who play a key role in teaching the children in the household and may involve extended family, grandparents, or siblings.

Language differences. The existing literature on CI-NCIs describe the interventions being implemented in English with majority English-speaking families. While Latinx caregivers may speak English, some caregivers will be more comfortable receiving information and instruction in Spanish. Caregivers who are native Spanish speakers report that they prefer Spanish as the language of interaction with professionals, whether that be with a Spanish-speaking early interventionists, or through an interpreter (Cycyk & Hammer, 2018; Kummerer & Lopez-Reyna, 2007). Additionally, caregivers may see preserving the home language as a priority, in which case strategies must not only be taught, but implemented in the home language in order for caregivers to perceive it as socially valid (Cycyk & Hammer, 2018). Current practices in CI-NCIs goals, procedures, and outcomes may not align with the lifestyle and priorities of Latinx caregivers. Adaptations are necessary in order to maximize the satisfaction with outcomes.

Social Validity

The term "social validity" refers to whether an intervention's goals, procedures, and outcomes align with the goals, beliefs, and/or priorities of a particular population. The term was coined during 1978 research in the field of Applied Behavior Analysis. Wolf referred to intervention participants as "consumers", and defined social validity as having three components: consumer's selection of intervention targets, consumer's compatibility with intervention tactics, and consumer's evaluation of intervention impact (Wolf, 1978). Since then, components of social validity have appeared in intervention research in many areas, including developmental psychology (Black & Teti, 1997), early childhood education (Hammer & Sawyer, 2016; Brown et al., 2011; Boyce et al., 2010), and early intervention (Ijalba, 2015; Peredo, Zelaya, & Kaiser 2018; Simon-Cerejido & Gutierrez-Clellen, 2014). The definition has been changed and adapted, and has since then reappeared in studies as an intervention's cultural sensitivity (Black & Teti, 1997), its alignment with consumer's social perspective (Strain et al., 2012), or consumer's perceived effectiveness (Hammer and Sawyer, 2016). A consensus has not been reached on how exactly to define social validity. The social validity of the intervention described in this paper will be examined in terms of the participants alignment with the intervention goals, procedures, and outcomes. However, researchers can agree on the consequences of a lack of social validity, which range from poor intervention fidelity, poor attendance, and even attrition (Hammer & Sawyer, 2016; Ijalba, 2015; Strain et al., 2012).

Social validity data can be used to determine if an intervention was successful with the population it was applied to, as well as inform adaptations to future iterations of programs. Studies measuring the social validity of interventions may choose to do so through taking attendance data (Roberts, 2008), or treatment fidelity data (Boyce et al.,

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2010) suggesting that families would only continue to participate in an intervention and use the intervention strategies if they found the intervention beneficial. Other studies have used surveys (Black & Teti, 1997; Bernhard et al., 2008; Cooke et al., 2009), interviews (Hammer & Sawyer, 2016), and focus groups (Binger et al., 2008), examining more qualitative information about the families perceptions of the intervention goals and satisfaction with outcomes. Collecting multiple sources of data strengthens evidence of the social validity of the intervention, as well as gives an in-depth look at the weaknesses in the intervention, which leads researchers to potential future adaptations.

While several studies attempt to measure the social validity of an intervention, very few studies look at whether taking steps to improve the social validity of an intervention results in improved outcomes for those who participate. A landmark study by colleagues Strain, Barton, and Dunlap (2012) examined the link between social validity and evidence-based practice. Since there is such a benefit to making social validity adjustments to interventions, the failure to include a social validity component in an intervention may result in consequences ranging from a lack attendance, intervention fidelity, or dissatisfaction with intervention outcomes (Strain et al., 2012).

Social Validity of Naturalistic Communication Interventions for Latinx Caregivers

The literature base is particularly underdeveloped when it comes to the adaptation of caregiver-implemented interventions for Latinx caregivers. However, this paper will discuss two key studies where evidence-based caregiver implemented interventions are adapted for use with Latinx families (Ijalba, 2015; Zayala, & Kaiser, 2018). The findings of these pilot studies offer some preliminary support for using caregiver-implemented interventions with Latinx caregivers. Additionally, they provide some recommended

adaptations to existing programs and directions for future research, such as the program described in the subsequent sections of this thesis.

Shared book-reading is often an element of CI-NCIs, and has strong evidence for increasing expressive vocabulary in children with language disorder. Ijalba (2015) implemented a shared book-reading intervention with 12 Spanish-speaking caregivers of children with Primary Language Impairment (PLI), and compared their outcomes to a group of 12 Spanish-speaking caregivers who did not participate. The goal of the program was to increase vocabulary and expressive language use in the children, and change caregiver attitudes towards first language (Spanish) literacy and use of strategies to enhance language development. The program included a pre-intervention interview asking the caregivers about objects, activities, and themes that were common in their homes with the intention of teaching the strategies in a familiar, culturally appropriate context. Researchers administered a post- intervention social validity questionnaire and pre- and post- intervention interviews on parent's perceived effectiveness of the intervention. The caregivers in the treatment group displayed a high degree of satisfaction with the intervention and unanimously gave scores of 3 out of 3 across all items in the social validity questionnaire (Ijalba, 2015). This study gives preliminary support for not only the use of NCIs with Latinx caregivers, but also the individualization of intervention activities to ensure relevance and cultural appropriateness of the intervention.

Enhanced Milieu Teaching (EMT) is an NCI that has strong evidence for use with monolingual English-speaking children (Roberts & Kaiser, 2011). Peredo and colleagues (2018) piloted an adapted version of the program, EMT en Español, for use with Latinx caregivers. The rigorous adaptation process included both linguistic and cultural

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adaptations to the program. Linguistic adaptations included a translation process of all content, as well as adjustments of language targets to account for linguistic differences between Spanish development and English development. For example, the researchers took into account some key characteristics of Spanish language development in morphology, gender agreement, and necessity of articles. In order to culturally adapt the intervention, researchers turned to an expert panel who either identified as Latinx or had sufficient experience providing interventions to Spanish-speaking families. The reviewers suggested that the play-based element portion of the intervention be adapted to structured activities that could be done at a table rather than the floor to better align with the Latinx lifestyle. They also suggested that the intervention occur in the family's home. Post-intervention social validity data suggested that the Latinx families found the intervention to be both successful and appropriately structured (Peredo et al., 2018).

CHAPTER II
PURPOSE OF THESIS

The purpose of the present thesis is to discuss the social validity of an adaptation of a parent-training program for Naturalistic Communication Intervention (NCI) for use with Latinx caregivers of young children with early language concerns in the northwestern United States. This thesis adds evidence to a limited research base on the social validity of NCIs with Latinx caregivers. This paper aims to address the following question: What elements of the goals, procedures, and outcomes of a culturally adapted naturalistic communication intervention program were socially valid for Spanish-speaking caregivers of Latinx descent living in the pacific northwestern United States in enhancing communication of young children with early language concerns?

Through addressing the research question, the author of this thesis intends to determine whether future adaptations are needed to improve the social validity of this particular intervention as well as provide new evidence to a narrow literature-base. The clinical implications provided guide professionals on how to appropriately adapt CI-NCIs to Latinx caregivers of young children in order to make those interventions more successful in promoting caregiver and child outcomes.

CHAPTER III
METHOD

Participants

Families were recruited through a local early intervention agency with the assistance of Spanish-speaking early intervention providers and an interpreter. Families were recommended for the program by these individuals if their children were exposed to Spanish in the home, were five years of age or younger, and who parents believed to have fewer than 200 words. Potential participants were contacted by one of the intervention supervisors to confirm eligibility and give detailed information on the program. Eighteen families were initially contacted, and seven families participated in the program, including primary and secondary caregivers of the child.

Caregivers. A total of eight primary and secondary caregivers participated in the study. Six mothers, one father, and one grandmother attended at least one of the intervention sessions. See table 1 for descriptions of each caregiver. The caregivers ranged from 39 to 67 years of age, and the average age was 45 years of age. The average age of primary caregivers, specifically, was 42 years. All caregivers reported Spanish as the primary language spoken in their household. All caregivers were of Mexican origin and born outside the United States. All caregivers who participated in the program listed "high school" as their highest level of education, with the exception of one secondary caregiver whose highest education was middle school. All families reported to be low-income. Seven out of nine of the caregivers reported that they were employed, one caregiver reported that she was unemployed, and one caregiver reported that she was retired.

Children. The eight children included in the study were between 25 and 47 months of age. Their average age was 35 months. Six of the children were males, and two were females. Six of the children were identified by the local early intervention provider as having a communication delay. All but two of these children had already received early intervention services for communication prior to beginning the intervention. The remaining child was at-risk of having communication delay due to family history of Autism Spectrum Disorder.

Description of Intervention

The intervention adapted for this study is a CI-NCI developed in 2009 by professors at a local university's speech and language pathology master's program. Table 2 contains a description of the intervention strategies included in the communication intervention program (Moore et al., 2014). The program was implemented as a clinical-training rotation for graduate clinicians to learn about NCI strategies and best practice in early intervention. It was a community-based intervention, and intended for caregivers of children with communication delay or disability.

Table 1

Participant Demographics by Individual

Pseudonym	Age	Sex F/M	Age of Arrival to US	Education	Working Status	Relationship to Child	Primary (P) or Secondary (S) Caregiver?
Sofia	40	F	14	High School	Employed	Mother	P
Gabriel	44	M	28	High School	Employed	Father	S
Valentina	47	F	26	High School	Employed	Mother	P
Milagro	40	F	7	High School	Employed	Mother	P
Jennifer	45	F	17	High School	Employed	Mother	P
Rosario	67	F	50	Middle School	Retired	Grandmother	S
Andrea	45	F	N/A	N/A	Employed	Mother	P
Alma*	39	F	21	High School	Unemployed	Mother	P

*This participant chose not to participate in the post-intervention focus group

The intervention took place in an urban city in the Pacific Northwest for a duration of ten weeks. There were 10 weekly sessions over a three-month period which included one home-visit and one pre-intervention data collection session. Families were offered additional sessions if they were absent for a group session. When caregivers arrived at sessions, the children were taken to a classroom where a playgroup was held. In the second classroom, the caregivers attended a session led by the program directors, who are certified speech-language pathologists along with graduate students who served as coaches for individual families. All coaches were graduate students in either speech-language pathology or early intervention and were identified as having Spanish language abilities. In the children's play group, graduate students who were trained in the program strategies provided the intervention.

A study examining the effects of the intervention for eight Anglo-American, English-speaking families concluded that caregivers participating in the intervention increased in their responsivity and use of communication-enhancing strategies (Moore et al., 2014). The children involved in the study improved their expressive communication measured by an increased number of vocabulary words post-intervention on the MacAurthur-Bates Communicative Development Inventory (MCDI), increased Mean Length of Utterance (MLU) in play, and a higher percentage of child-initiated interactions. For the first nine years that the program was offered to local families, it was offered in English only. The program was adapted for use with Spanish-speaking families for the first time in 2018.

Table 2

Intervention Strategies

Strategy	Purpose	Strategy Name(s)
Get Ready for Success: Positive Behavior Supports	- Choosing communication-rich activities - Limiting distractions - Empathetic, engaged teaching	*N/A*
Create Opportunities for Children (Environmental Arrangement)	- Selecting, arranging, and managing materials - Disrupting child's expectations or stopping preferred actions	*Do something silly, in sight, out of reach, do something wrong/different, assistance*
Watch and Identify (Responsivity)	- Identifying and responding to child's attempts to communicate - Shared communication turns	*Wait, piece by piece*
Give a Gift (Expansion)	- Repeating child's gesture, vocalization, or word - Adding an additional communication component	*Plus one*

Cultural Adaptation of Intervention

In adapting the program, researchers utilized the Cultural Adaptation Process

Model developed by Domenech-Rodriguez & Weiling (2004). This model, which

consists of three phases, provides interventionists with an outline of the considerations

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involved in adapting a program for a different populations. Below is a description of the three phases in this model.

 Phase I: Setting the stage. The first phase, "setting the stage" requires both communication with community stakeholders and specialists, and a review of literature regarding the population for which the adaptation is being made. For this intervention, the community stakeholders and specialists refer to the local early intervention practitioners who collaborated in the recruitment and organization process. Program developers reached out to a local early intervention provider to inquire about families who may benefit from the intervention, as well as their potential needs, such as transportation. A literature review was conducted by program developers in order to identify components of the intervention goals, activities, measures, and procedures that may need adaptation for families who hold traditional Latinx beliefs, values, and practices. The literature review was conducted with the intention of finding current information on the target population, such as child-rearing practices and perspectives towards supporting language development in Latinx families (e.g., Domenech-Rodriguez & Weiling, 2004), other caregiver-implemented intervention programs in Spanish (Peredo et al., 2018) , and suggestions for recruiting ethnically diverse families (e.g., Harachi, Catalano & Hawkins, 1997).

 Phase II: Initial adaptation. The second phase "Initial Adaptation", includes changes to the goals, activities, measures, and procedures that were made as a result of the literature review and collaboration with professionals. Based on the findings in the literature review, researchers identified that they needed to make the following adaptations prior to beginning the program: ensure Spanish proficiency of the program

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staff (Peredo et al., 2018), translate all materials into Spanish (Douglas & Craig, 2007), include culturally relevant materials, such as videos from prior Spanish-speaking participants (Peredo et al., 2018), and the adaptation of specific strategies, such as "give a gift" (*plus one*) to include article usage due to the necessity of article use in Spanish (Peredo et al., 2018), as well as the inclusion of two favorable choices for the family when using strategies such as "choices" or following the child's lead to reduce the emphasis on child autonomy (Cycyk & Hammer, 2018). This phase also includes pilot testing the adapted intervention with a group of families representing the target population and soliciting their feedback on the intervention (Domenech-Rodriguez & Weiling 2004).

   Phase III: Adaptation iterations. The purpose of the third phase is to refine the intervention further. Specifically, feedback from participants and social validity data ensured that the intervention was culturally appropriate. This paper will analyze the results of stages one and two of the adaptation of the intervention and suggest future adaptations to the goals, procedures, and outcomes of the intervention to be considered for phase three (Domenech-Rodriguez & Weiling, 2004).

Informed Consent

   Caregivers were not required to participate in the study in order to receive the intervention. The participants were not alerted to the research study until the 11th (and final) intervention session to avoid undue influence on their decision to participate. When alerted to the present study, families were informed that agreeing to participate in the study would not result in release of their personal information, such as their name or child's name(s), immigration status, or educational history. All data gathered from

families would remain anonymous for their protection. Copies of consent paperwork were provided in Spanish and English, and reviewed verbally and entirely with families who preferred. Appendix A includes a copy of the consent form. Throughout the informed consent process, families were given many opportunities to ask questions. The consent forms specified that researchers had permission to retroactively look at the intervention data collected for programmatic reasons and use it for the present study. In accordance with the Health Insurance Portability and Accountability Act of 1996 client files were de-identified prior to their use in this study.

Measures

The sources of data for this study include attendance data, two caregiver interviews, an anonymous satisfaction survey, field notes written during each session, and a focus group which families were invited to attend following completion of the intervention program. All measures completed by participants, such as the interviews, focus group, and any written materials, were provided in Spanish. English copies of handouts were available for families who wanted written information in both languages. This does not include attendance data or field notes, as families did not access these measures. All other measures were adapted from existing materials that were previously used for the intervention in English. Program directors used a collaborative and iterative translation process to translate all written materials, which is an alternative approach to back translation (Douglas & Craig, 2007). In the collaborative framework, the initial translation was completed by a native speaker of Spanish familiar with Mexican dialect, which was then reviewed by a second Spanish speaker. The program materials then went through a third review by a native Spanish speaker to ensure accuracy.

Attendance

Attendance data was collected using data sheets created by the program developer. Data sheets for attendance tracking included whether the primary caregiver was present at the intervention session, whether an additional caregiver was present, and notes about the session. Appendix B includes an example data sheet.

Caregiver Interviews

The graduate students who acted as intervention coaches for individual families completed parent interviews at the pre-intervention and post-intervention phases. They took one pre-intervention interview that inquired about the caregiver's perceived reasons for their child's communication delay and the caregiver's expectations and goals for participating in the program. The post-intervention interview asked about how often the caregivers used each strategy, and whether the family's goals were met.

Field Notes

Field notes were taken each session by the program supervisors. These were qualitative observations of the intervention sessions. Field notes included information on families' attendance, understanding of program content, accommodations needed, and any additional information that they deemed may improve further iterations of the intervention.

Caregiver Satisfaction Survey

The caregiver satisfaction survey was created by the program developer as an anonymous way for participants to provide feedback on the intervention in order for adaptations to the program to be made if necessary (Moore et al., 2014). Appendix C includes the English version of the caregiver satisfaction survey. The survey includes ten

statements for participants of the program to rate their agreement on a Likert-type 1-7

scale where seven represented "strongly agree" and one represented "strongly disagree".

The statements covered a range of ideas, including whether the individual was satisfied

with the schedule and length of program, e.g. "The duration of [the program] was

appropriate (10 sessions)", whether the program strategies aligned with the individual's

cultural beliefs and practices, e.g. "The strategies taught through [the program] matched

my beliefs, values, and priorities for child-rearing", and whether the individual felt their

child(ren) benefited from the intervention, e.g. "[the program] was effective for

increasing the number of words, signs, or gestures my child uses". The final three

questions on the survey were free-response questions prompting families to suggest three

things they enjoyed about the program, three things they would change about the

program, and three suggestions they have for the program directors.

Focus Group

The focus group questions were open-ended questions designed to gather more

information on whether the intervention matched the family's cultural values, whether

they felt the intervention was successful, and what suggestions they have for future

program development. The focus group questions were collaboratively developed by the

program directors and the author of this thesis to ensure the questions were open-ended to

encourage rich discussion (Beyea & Nicoll, 2000), were appropriately translated

(Douglas & Craig, 2007), and targeted the information the researcher sought to answer.

Twelve questions were included in the final focus group script. Appendix D contains a

copy of the focus group script in English. The questions covered several aspects of the

intervention program, including setting, e.g. "As you know, the sessions for [the

program] primarily take place in a group with other caregivers with the addition of a few individual sessions. How do you feel about the focus on group sessions and the use of individual sessions?", length, e.g. "[the program] is currently scheduled for a total of 11 sessions over approximately 3 months. How do you feel about the length of the program?", strategies, e.g. "Out of the strategies we taught: *waiting, giving choices, something new or different, piece by piece, in sight out of reach*, which one(s) were more comfortable for your family's communication style?", and cultural appropriateness, e.g. "What barriers (of any type) could be removed to increase participation of children and families from Spanish-speaking, Latino backgrounds in [the program]?".

Procedures

Attendance

To track the families' attendance, the graduate students who were assigned as parent coaches filled out parent data sheets at each session. A total of 10 data sheets were completed per family. Data sheets were then de-identified and analyzed to determine the average overall attendance of caregivers, average attendance of primary caregivers, and caregivers' attendance of make-up sessions. This information was also used to track the families' punctuality, and whether families attended a make-up session.

Caregiver Interviews

The graduate students took notes on the caregivers responses, and recorded them by hand on an interview form. The caregiver interview data was typed into an electronic database and the percentage of caregivers reporting use of strategies, as well as caregivers goals met, were calculated.

Field Notes

Field notes were written weekly during the intervention sessions. Following the conclusion of each session, supervisors wrote open-ended reflections within 48 hours of the session. The program supervisors took notes in a Microsoft word document. The notes were separated by dates of the session, and included bulleted lists in order to separate ideas.

Caregiver Satisfaction Survey

At the start of the focus group, participating families were given the caregiver satisfaction survey to assess their satisfaction with the program. Families were instructed not to put names on the surveys in order to remain anonymous. Surveys were collected by the focus group moderator and placed into an envelope which the moderator transferred to the program director.

Focus Group

During the final session of the intervention all caregivers were invited to attend a focus group about the program that occurred the following week at the same time, day, and place as the typical sessions. Childcare was provided in a separate room to encourage families' attendance. Seven participants attended the focus group, two of whom were secondary caregivers. Five of the seven families included in this study were represented at the focus group. The moderator of the focus group was not involved in development or instruction in the intervention program. Additionally, the moderator identified as a native Spanish speaker of Mexican dialect and as Latina. The focus group was audio recorded and lasted 1 hour and 47 minutes. After the discussion, the families were compensated for their participation with gift cards in the amount of $50.

The audio recording was transcribed in its original language by the author of this thesis, who has advanced proficiency in Spanish. After the focus group was fully transcribed, it was reviewed for accuracy by the moderator who is a native speaker of Spanish.

Data Analysis

The data in the present study were analyzed both quantitatively and qualitatively. The quantitative analyses were completed using the SPSS Version 22 statistical analysis software (SPSS for Windows Inc. Version 22. Chicago, Illinois). Qualitative analyses of data were completed using grounded theory and marginal coding, a method described below (Strauss & Corbin, 1998; Glaser & Laudel, 2014).

Attendance data

Attendance data was taken from parent data sheets and entered into an electronic spreadsheet then statistically analyzed for the average overall attendance of primary caregiver, attendance of secondary caregivers, average number of absences, and number of make-up sessions offered.

Caregiver Interviews

The caregiver interviews were de-identified, then entered into two separate electronic spreadsheets by an undergraduate student. They were analyzed qualitatively for trends in pre-intervention goals, as well as quantitatively what strategies were most and least utilized by families, and the percentage of caregivers who believed that the goals for the intervention were met.

Field Notes

Field notes taken during the intervention were read by the author of this thesis in their entirety on two separate occasions, and then coded in the margins for general themes arising from the notes, such as "attendance" or "technology". Each theme was counted to determine how many times it was mentioned, and these numbers were used to determine which themes were the most commonly noted by the program supervisors and, therefore, most relevant to answering the research question.

Satisfaction survey

The caregiver satisfaction survey was statistically analyzed for average ratings per question and average satisfaction rating across all items. Free response questions were analyzed by the same grounded theory approach described for the field notes (Strauss & Corbin, 1998; Glaser & Laudel, 2014). In a grounded theory method, themes arise from the text itself; no themes were decided upon prior to reading the written responses. For example, after reading the written responses, the author of this paper summarized the suggestions into categories represented by one word or a short phrase, such as "scheduling" suggestions, "parent group" suggestions and "play group" suggestions. This information was used to supplement the information gathered in the focus group.

Focus group

The focus group was qualitatively analyzed using grounded theory and margin coding. This approach is an evidence-based method of analyzing qualitative data in which the themes arise from the text, and the codes applies are developed via consensus from the researchers (Gläser & Laudel, 2013). To begin, the author of this thesis and her advisor independently read through the entire transcription of the focus group. The purpose of the initial review was to gain familiarity with the content and form general

first impressions that would inform codes applied on the second pass. On the second read-through, reviewers left notes in the margins summarizing the theme of the dialogue. The author of this thesis compared the codes applied by herself and her supervisor line-by-line, and noted all discrepancies. Discrepancies in coding were resolved by consensus with the author of thesis and her advisor. A codebook was created based on the initial codes, along with coding definitions, which are available in Appendix E. Parent codes, or primary codes, were derived from larger themes in the discussion and child codes, or secondary codes, were derived from discussion of sub themes revolving around the larger theme (Strauss & Corbin, 1998). For example, the parent code "Change of Schedule Desired", was applied for any discussion surrounding the program's schedule. The child code "Change of Schedule Desired: Evening", was additionally applied if the individual suggested the *evening* as a potentially better schedule.

When the codebook was developed, the author of this thesis and her advisor then independently re-coded the focus group using the agreed-upon codes. The coding from both authors were compared. All discrepancies in coding were discussed between the author of this thesis and her advisor, which led to a further refinement of the codebook. Both the author and her advisor coded the focus group a third time. Codes assigned by both the author of this thesis and her supervisor on the third pass were inputted into a spreadsheet, and given the value of "1" for agreement, and "0" for disagreement. The average for both parent codes and child codes were used to find interrater reliability. The interrater reliability for the parent codes applied to the focus group was 91%. The interrater reliability for the child codes applied to the focus group was 81%. After

reliability was calculated, the author of this thesis and her adviser resolved all

disagreement by consensus to finalize the codes.

CHAPTER IV
RESULTS

Attendance

Overall attendance. Primary caregivers attended an average of 7.86 out of 10 sessions. Four families invited secondary caregivers to attend one or more intervention session. Out of the six participating families, only two families were able to attend all 10 sessions. The lowest attendance was five out of 10 sessions. Make-up sessions were offered to all four families who missed one or more treatment sessions. The caregiver who missed five out of ten sessions, Alma, had conflicts with her job. She was offered and attended three make-up sessions to cover missed content. Other families missed sessions for reasons related to work obligations, illness, or travel.

Secondary caregiver participation. In most cases, secondary caregivers attended when the primary caregiver could not. At least one caregiver for each of the families was present on average 8.14 sessions. Siblings also attended frequently and joined the play group. Two families brought additional siblings with them at least once, in addition to the two families who had twins. Table 3 displays the results of the participants' attendance.

Table 3

Caregiver Attendance Results

Primary Caregiver	Number of Sessions Attended	Secondary Caregiver Attendance	Make-up Sessions Attended	Total Attendance
Sofia	9	8	1	10
Valentina	8	0	1	8
Milagro	8	2	1	9
Jennifer	9	5	N/A	10
Andrea	10	1	N/A	10
Alma	5	0	3	5

Note. The overall attendance score includes sessions where at least one caregiver is present.

Caregiver Interviews

Pre-intervention interview. Caregivers were asked their primary and secondary reasons for participating in the program. For the primary reason, five out of six primary caregivers reported that they participated in the program due to their child's communication difficulty. The sixth primary caregiver reported that she participated in the program because her early intervention provider suggested she do so. Secondary

reasons listed by caregivers for participating were more varied based on the individual's circumstance, such as Valentina, who wanted her twins to socialize with other children. Alma, who also had twins, reported that she compared her children, so her goal for participating was to "catch him up" to the other twin. Sofia's secondary reason for participating was because her older child had a diagnosis of autism spectrum disorder, and she wanted to give her younger child a "head start" in case he had the same difficulty communicating. Jennifer reported that her son was a late talker and she wanted him to be prepared for preschool. Milagro wanted her child to catch up to children his age on walking and talking.

The next question inquired about what the caregivers believed was the cause of their child's communication difficulty. Two of the caregivers reported that this was due to their child being born premature, two of them reported that they were unsure, one caregiver reported that it was due to the child's diagnosis of Down Syndrome, and one reported that it was hereditary late-talking. The last question asked caregivers what they believed would help their child to improve. Out of the six interviewed caregivers, four of the caregivers gave a response that involved parental agency in helping the child whether that be talking and practicing more, increased attention to child, or learning strategies. Out of the remaining two, one said support from a speech and language pathologist would be helpful, and one caregiver did not offer a response.

Post-intervention interview. Caregivers were asked which of the trained intervention strategies they knew, how frequently they used them, and whether they taught them to additional caregivers. The caregivers reported that *giving choices, piece by piece, do something unexpected*, and *plus one* were the most utilized strategies.

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Assistance, *in sight, out of reach*, and *do something silly* were the three least utilized strategies. *Giving choices* and *in sight, out of reach* were also the most commonly taught to a secondary caregiver. The strategies are presented in Table 4 with interview data.

Table 4

Post-Intervention Interview: Strategy Use by Primary Caregivers

Strategy	Know strategy	Used strategy	Taught to others	Future use
Giving choices	6	6	3	6
In sight, out of reach	6	5	3	5
Assistance	2	2	1	5
Piece by piece	6	6	2	5
Do something silly	4	5	1	5
Do something unexpected	6	6	1	5
Wait	4	6	2	6
Plus one	5	6	2	6

Note. The caregivers interviewed were all primary caregivers (N = 6)

In the post-intervention interview, caregivers revisited the individual goals they set with their coaches and discussed whether or not they were met. The individual caregivers set between one and three goals, and 100% of caregivers met at least one of their goals. All six primary caregivers set a vocabulary goal for their child, which ranged from 15-150 new vocabulary words depending on the child's developmental level. All six caregivers reported that the vocabulary goal was met and that it was a helpful goal. Four out of the six caregivers had a goal to increase rate of communication, or number of child-initiated interactions per minute. 100% of caregivers who set a rate of communication goal met this goal, and they all reported that it was a helpful goal. Three caregivers chose a goal for combining words into sentences, all of which were met. 66% of caregivers reported that combining words was a helpful goal. One final goal chosen included learning new gestures, set by Jennifer, which was not met; however she still reported that it was a helpful goal to have.

Field Notes

Out of the themes derived from the field notes, the most prominent ideas that were noted over multiple sessions were: attendance, technological difficulties, caregiver confusion with intervention content, caregiver concerns about behavior and development, transportation, attendance of additional family (such as siblings or secondary caregivers), and supports requested post-intervention. Each of these themes will be described below.

Attendance. Each day, the program director noted which families arrived late or left early. Every session at least one family was late and/or left early. Many of the families needed to do this for scheduling reasons. For example, one caregiver, Alma, had to leave every sessions early to attend work and after several weeks could no longer get

the time off to attend. She was offered alternative home-visit sessions. One of the families regularly required transportation via taxi in order to attend.

Technological Difficulties. The field notes included family reports of difficulty recording their children with the video cameras and audio recorders that were used in the program. This was either due to a misunderstanding of instructions, or difficulty with the children's behavior on camera.

Use and understanding of strategies. The program director noted when caregivers discussed using particular strategies in intervention. The strategies mentioned for caregiver use included *wait, do something silly, giving choices, plus one*, and *in sight, out of reach*. The caregivers also expressed difficulty with some strategies, such as *in sight, out of reach*, and *plus one*, either due to perceived danger of the strategy ("in sight out of reach"), or difficulty understanding when to implement the strategy (*plus one*).

Behavior and Development. The program director frequently noted caregiver concerns about child behaviors, for example, toilet training, that were not related to the curriculum. Although families were encouraged to follow-up with their early intervention case managers about such concerns, however, behavioral concerns were mentioned nearly every session. The caregivers mentioned other behaviors, such as aggression towards siblings. They also requested information on some communication-related topics not covered in the curriculum, such as home language choice (L1 or L2), effects of television on language development, and how to choose a preschool program.

Additional Family. The program director noted whenever an additional caregiver attended the session. The caregivers sometimes also brought older siblings to the sessions

and left them in the play group. This information is reflected in the attendance data above.

Future Support. The participants reported that they want to attend the program in the future as well as continued support as their children develop. Many of the families wanted to know what to do once the children were beyond preschool age, and how to further support communication.

Caregiver Satisfaction Survey

Eight caregivers, primary or secondary, completed the anonymous caregiver satisfaction surveys. The participants' responses to items ranged from a score of three to a score of seven out of seven possible points. The average answer across all items was 6.73 out of 7 possible points. Item 8 (*"I would recommend the intervention to other caregivers"*) was the only item awarded the full seven points by all eight participants. The item with the lowest average rating of 6.25 was Item 5 (*"The strategies taught through the intervention matched my beliefs, values, and priorities for child-rearing"*). Table 6 displays the range, mean, and standard deviation of each survey item. The individual items are available in Appendix C.

On the open-ended portion of the survey, six out of eight caregivers reported that they enjoyed sharing experiences with the other caregivers. Other things families reported they enjoyed included learning to support their children, learning to wait for the child to initiate communication, and the home visit from coaches. For program suggestions, five out of the eight caregivers suggested a longer intervention, three suggested a different intervention schedule, and one suggested a larger class with more families.

Table 6

Descriptive Statistics for Caregiver Satisfaction Survey

Survey Item	Range	Mean	Standard Deviation
Q1	6-7	6.88	.354
Q2	5-7	6.63	.744
Q3	5-7	6.63	.744
Q4	6-7	6.75	.463
Q5	3-7	6.25	1.488
Q6	5-7	6.63	.744
Q7	6-7	6.75	.463
Q8	7-7	7.0	.000
Q9	6-7	6.88	.354
Q10	6-7	6.88	.354

Note. Items were scored on a Likert-type scale, where 7 corresponded with "strongly agree" and 1 corresponded with "strongly disagree".

Focus Group

The prominent themes discussed in the focus group were scheduling, class format, written materials, video/audio recording, strategies, cultural appropriateness, and overall satisfaction. As previously stated, all participants were assigned pseudonyms for their

privacy. Quotes from participants will be provided in the original language in the left-side followed by an English translation to the right.

Scheduling. This theme included mentions of the intervention length or schedule. All focus group participants agreed that they wanted a longer intervention. Valentina expressed (left Spanish, right English),

Siento como que fue el proceso de aprender y ahora que ya empecé así como hacerlo una rutina, sino un hábito de las estrategias, el programa paró, entonces no me dió tiempo de ponerlo más en práctica.	I feel like [the program] was the learning process, and now that I have begun to use [the strategies] in my routine, not yet a habit, the program ended. So I was not given enough time to put [the strategies] in practice

Other participants agreed with Valentina that they felt they were just beginning to understand and use the strategies when the program ended. Other reasons mentioned were that they felt like they needed more time to learn strategies, or that they wanted longer-term support from coaches.

Some participants wished to change the schedule to accommodate their work schedule. Sofia had a work schedule that conflicted with the intervention. However, she attended nearly every session. She explained (left Spanish, right English):

En lo personal, considero que el tiempo, porque yo trabajo de noche y, por ejemplo ,ahora solo dormí 2 horas. Es	*decir, el horario y lo demás me pareció muy bien.*

Personally, I would consider [changing] the schedule, because I work overnight, and for example, right now I have only	had two hours of sleep. So [I'd change] the schedule, but everything else went very well

Sofia and two other participants suggested a change to an evening schedule to accommodate their work schedules. A third participant suggested a change to earlier in the mornings, also citing her work schedule as the reason.

Class format. The class format refers to what aspect(s) of the program formatting the families liked, such as the group classes, and individual breakout sessions. Participants unanimously agreed that they were satisfied with the group format of the class. The participants cited different reasons they liked the group format; most commonly, they reported that they learned new strategies for supporting their child's communication from other caregivers.

Caregivers claimed that they learned strategies from one another to better support their children's development, but there was also an element of emotional support that came from being in a group of caregivers with similar backgrounds. One mother, Valentina, expressed that having other caregivers to talk to helps her feel less guilty for her children's communication difficulties. Valentina felt she gained emotional support through being around other caregivers of children experiencing communication difficulties. She said (left Spanish, right English):

A veces pensaba que solo a mí me pasa y me sentía culpable por no poder darle al niño lo que quiere y al escuchar cuando	*lo demás exponían sus casos yo decía 'entonces, no soy yo' porque esto también pasa con las todas mamás.*

Sometimes I thought that it was only	hearing everyone else's cases, I said
happening to me, and I felt guilty for not	'alright, it's not just me', because this
giving my child what he needs, but	happens to all mothers.

Written materials. The program offered Spanish language handouts for the lessons, and the participants were asked in the focus group whether they found the written materials useful. The participants overall responded very positively to the written materials, and none of the participants expressed that they did not like or use the materials. Some caregivers mentioned that they used the written materials for practicing at home, and hung them in various places in their homes to help cue them to use the strategies. Milagro pointed out that someone could (left Spanish, right English):

... ponerlo en el refrigerador o en la	… put it on the fridge or the wall and
pared y cuando uno pasa caminando por	when she walks by, she can read it and
el uno lo puede leer y ver una estrategia	see one strategy or another…
u otro….	

Video and audio recording. During the focus group, caregivers were asked about the video and audio equipment they used to record daily routines, and whether they found it difficult. The participants agreed in general that it was difficult to record their children, and two different reasons were given. The most commonly mentioned reason for technological difficulties was children not cooperating while on camera. Sofia said (left Spanish, right English):

...en cuanto dejamos de grabar a mi niño él comenzó a hablar y decía 'ojo, panza, pie, zapatos'.	...as soon as we stopped recording, my son started to talk, and said 'eye, belly, foot, shoes'.

The participants generally agreed that the video recordings didn't reflect their children's best communication. One reason was that the camera or recorder was difficult to use. For example, Andrea mentioned that she finished videotaping only to realize it hadn't been recording.

Satisfaction and use of strategies. The participants were asked about their use of strategies presented in the program as well as satisfaction with strategies. The participants discussed the expansion strategy, *plus one* (*más uno*), most frequently; however, the caregivers discussed using *piece by piece, do something silly* and *in sight, out of reach*. Caregivers discussed the ability to teach their children new words through the *plus one* strategy in particular as well as ease of use, suggesting that they perceived it as effective. Valentina mentioned that the strategies can be combined, such as the environmental arrangement strategy *in sight, out of reach* and expansion strategy *plus one*, through putting something out of her child's reach, then expanding upon their request. Valentina, among several other caregivers, used mealtimes as chosen routines to practice the strategies. She gave an example of doing this at breakfast time, putting leaving bananas, apples, honey, and milk out of their reach (left Spanish, right English):

… para que ellos apliquen la estrategia de 'a la vista pero no al alcance' y la estrategia de 'más uno' ya que me van a decir 'más manzana por favor'.	… so that they use the strategy of in sight, out of reach, and the strategy 'plus one' so that they can tell me 'more apple please'.

While some caregivers had "favorite" strategies to discuss, Sofia pointed out that there are different times in the day for all of the strategies, so she was satisfied with all of them. She appreciated having options of multiple strategies to choose from to accommodate the changing demands of the day. She reported (left Spanish, right English):

En un día hay momentos específicos para usar cada estrategia, entonces las utilizo todas durante el día y no tengo preferencia por alguna de ellas, sino por todas.	In one day, there are specific moments to use each strategy, so I utilize all of them during the day, and I don't have a preference for one [strategy], but for all of them.

Difficulty with Strategies. Participants expressed difficulty with three strategies: *plus one, piece by piece,* and *in sight, out of reach*. However, these difficulties were not commonly expressed in the focus group, as the families spent far more time discussing the positive aspects of the program. Milagro explained that it was difficult to change the way she speaks to her child to use the expansion strategy (i.e., plus one). She explained (left Spanish, right English),

Yo tengo mi vocabulario acostumbrado a hablar como si fuera adulto y no al nivel de un niño, entonces a mí la cuestión de una palabra y más, para mí me costó aprender.	I am accustomed to my vocabulary of speaking to him as if he were an adult and not at the level of a child, so for me plus one was difficult to learn.

While *plus one* was the most popular strategy discussed by participants, it was not ideal for everyone. Valentina expressed difficulty with putting this strategy into practice

and said it did not work for her. Jennifer was concerned that putting items out of her child's reach will put him in danger. She explained (left Spanish, right English),

Yo no hice "a la vista pero no al alcance" porque se me hizo muy peligroso, porque mi niño cuando necesita algo que está arriba el busca la manera de subirse a los muebles o de tomar una silla y agarrar las cosas entonces se me hizo muy peligroso poner las cosas arriba y todo lo que mi niño ocupa se lo puse a su alcance porque sentí que era ponerle en peligro a él y por eso decidí no implementar esta estrategia porque se puede caer y lastimarse.	I did not do "in sight, out of reach" because it seems very dangerous, because when my son needs something that is up high, he searches for a way to climb on the furniture, or take a chair and grab things, so it seems really dangerous to me to put things up high, and everything my son uses I keep in his reach because I felt like [putting things up high] would put him in danger, and that's why I decided not to use that strategy, because he can fall and hurt himself.

Rosario, Jennifer's mother who regularly attended the classes, agreed with Jennifer's perception of the strategy. This was challenged by Sofia, who pointed out that she could use *in sight, out of reach* with food or books instead of toys.

Cultural appropriateness. Participants agreed that the specific strategies and the intervention were appropriate for Latinx caregivers. Jennifer said (left Spanish, right English)

Yo pienso que latinos o no latinos los	I think that, Latino or not Latino,
niños y las madres somos iguales y los	children and mothers are the same, and
niños se desenvuelven igual tanto los de	children from other places develop the
aquí como los de otros lados, y que las	same as children from here, and that
madres estamos para aprender y que	mothers are here to learn, our children
nuestros niños están aprendiendo y	are learning, and I feel that the system is
siento que el sistema está muy bien.	very good.

Many other participants echoed this sentiment, stating that all mothers, regardless of their backgrounds, are the same, and want to help their children.

Valentina challenged the idea that the program should be referred to as a separate program from the English version. She explained (left Spanish, right English):

A mí en lo personal ya no me gustaría	For me personally, I would not like for
que se clasifique al programa en español	you to classify the program as in Spanish
y en inglés porque me hace creer que	and in English, because that makes me
ambos programas son completamente	believe that both programs are
diferentes.	completely different.

However, Sofia, a mother who does not speak English, spoke to the value of having a program offered in her native language. She stated (left Spanish, right English):

Yo en lo personal no lo miro como [Valentina], porque afortunadamente [Valentina] habla inglés, y nosotros no, y creo que por eso clasifican el programa en español e inglés, y creo que quizá el programa en español está hecho para personas que no hablamos inglés. Y creo que es bueno que exista este tipo de ayuda, de clases, de consejos en español. Porque ya que estamos en un país donde se habla inglés es bueno que existan estos programas donde podemos hablar en español por eso creo que ese es el motivo del programa.

Personally, I do not see it like [Valentina], because fortunately, [Valentina] speaks English and we do not, and I believe that maybe the program in Spanish is made for people who do not speak English. I think it is good that this sort of help exists, like classes, and advice in Spanish. We are already in a country where people speak English, so it's good that these programs where we can speak Spanish exist, and I think that's the motive behind the program.

Focus group participants were in agreement that the program was appropriate for caregivers of their shared cultural background; however, Sofia offered additional commentary to stress the utility of a program offered completely in Spanish. Sofia went on to discuss previous classes she had taken, stating (left Spanish, right English):

Yo he ido a otras clases, y afortunadamente tengo un intérprete, pero todo el proceso en las clases es más difícil.

I have been to other classes, and fortunately, I have an interpreter, but the whole process of the class is more difficult.

Overall Satisfaction. Participants were asked whether the program met their expectations. All five participants in the focus group commented that the program met their expectations. One mother, Valentina, said (left Spanish, right English):

Puedo decir que el programa superó mis expectativas.	I can say that the program exceeded my expectations

Other participants offered specific reasons why the program met their expectations such as their learning as a parent, or changes noted in their child(ren). Impressed with her child's advances, Andrea, along with all other focus group participants, requested to be invited to participate in future versions of the program. Andrea stated (left Spanish, right English):

Me gustó mucho porque si note el cambio de cuando mi hijo comenzó y ahora porque ahora ya habla más y se comunica más y creo que el programa ha valido la pena.	I liked [the program] a lot because I noticed the changes from when my son started and now, because now he's talking more and communicating more, and I believe that the program was worth it.

CHAPTER V
DISCUSSION

Little evidence is available to guide early interventionists on best practice with Latinx children and their families, yet these children are forming nearly one third of interventionists' caseloads (U.S. Department of Education, 2018). CI-NCIs have proven to be efficacious with Anglo-American, upper-middle class, monolingual English speaking families (e.g., Roberts & Kaiser, 2011), but research on Latinx caregivers values, beliefs, and child-rearing practices show some differences that may change the way they respond to the intervention (Peredo et al., 2018; Méndez, Crais, Castro, & Kainz, 2015; Kummerer & Lopez-Reyna, 2007; Méndez-Perez, 2000). The purpose of this thesis was to determine whether an adapted caregiver-implemented naturalistic communication intervention was socially valid for Spanish-speaking Latinx caregivers. The author of this thesis used multiple sources of social validity data to analyze elements of the intervention's goals, procedures, and outcomes to determine whether or not they aligned with the cultural and linguistic backgrounds of the participating caregivers. Findings suggest that the intervention goals, procedures, and outcomes were perceived as both appropriate and satisfactory by the caregivers who participated, but further adaptation may be considered as Phase III of the iterative cultural adaptation process to maximize outcomes for participating families (Domenech-Rodriguez & Weiling, 2004).

In the discussion that follows, aspects of the intervention goals, procedures, and outcomes that appeared to be socially valid for families from this background are discussed. Next, aspects of the intervention goals, procedures, and outcomes that were not socially valid and require future adaptation are discussed. Finally, suggested

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adaptations to practitioners serving Spanish-speaking, Latinx families to enhance the social validity of NCIs are provided.

What elements of the intervention goals, procedures, and outcomes were socially valid?

      Goals. The goals of the intervention program included increased expressive vocabulary, increased rate of communication, and increased use of strategies by caregiver. In general, the families expressed a strong desire to help their child communicate and wanted to play an active role in the intervention. Previous qualitative studies looking at perspectives of specifically Mexican immigrant mothers have also revealed that they want to take an active role in learning to support their child's development (Cycyk & Hammer, 2018; Kummerer & Lopez-Reyna, 2007; Tamis-LeMonda et al.., 2012). Yet, some previous literature on Latinx caregivers' expectations for child language development suggests that Latinx caregivers may not expect their children to speak before three years of age (Méndez-Perez, 2000); however, all of the caregivers participating in the intervention were concerned with the spoken language of their young children, many of whom were under three. This discrepancy between previous research and present findings may be due to individual differences, or the fact that most caregivers participating in this adapted intervention were already enrolled in early intervention services which would suggest some level of concern about their child's communication. The caregivers' stated goals for participating in the intervention align with the intervention's objectives, suggesting that the goals were socially valid for the caregivers who participated.

Procedures. Across the parent interviews, caregiver satisfaction survey, and focus group, participants expressed particularly high satisfaction with some of the program's strategies, the intervention group format, written materials, and language of intervention delivery.

Strategies. In both the focus group and post intervention interview, caregivers discussed at length use of the expansion strategy, *plus one*. This strategy was also included in a previous study looking at outcomes for an adapted Enhanced Milieu Teaching in Spanish (Peredo et al., 2018). The caregivers participating in that program all used the expansion strategy and generalized it after intervention to varying degrees. Expansion puts the caregiver in charge of how to expand her/his child's utterances, for example, if a child can use the word "*Perrito!*"("Puppy!"), the caregiver has the agency to choose if it is important for their child to start learning new verbs, such as "*Perrito corre!* ("Puppy runs"), or whether they prioritize gender agreement, in which case they would target adding masculine and feminine articles to nouns. Considering the results of this study and others, expansion appears to be an effective and socially valid procedure to use with this population when the strategy is adapted to include Spanish language differences.

Group format. Across the caregiver satisfaction survey, pre/post intervention interviews, and focus group, the caregivers preferred being with the other families over the individual aspects of the program. They learned strategies and ideas from other caregivers, and also got emotional support from other families. The group classes are socially valid for Latinx caregivers as they tend to identify with a more collectivist mindset, where they may place high value of feeling of belonging within a community

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(Vargas & Kemmelmeier, 2013). The feelings of shame or guilt for a child's disorder could relate to a cultural stigma towards disability in the Latinx community that has been previously documented (Kummerer, 2007; Méndez-Perez, 2000). A communal space to share these feelings with other caregivers who also may face the same stigma within their cultural community is a valuable resource, making it a socially valid procedure to include. While CI-NCIs in published literature are generally an individual format (Roberts & Kaiser, 2011) group therapy is a particularly effective adaptation to an intervention program for Latinx caregivers due to a desire for social closeness.

Language/written materials. The caregivers expressed a strong desire to share the information learned in sessions with additional family members, which is how many of them used the written materials. The materials also were perceived as easy to understand and use for at-home practice. The iterative translation process allowed for experts to collaborate in ensuring the written materials were quality translations in the target dialect, which may have contributed to the positive response. The families had access to not only quality written materials, but all intervention content in Spanish, which is an important aspect of providing intervention to Latinx caregivers pointed out across multiple studies (Cycyk & Hammer, 2018; Kummerer & Lopez-Reyna, 2007; Méndez-Perez, 2000; Peredo et al., 2018).

Outcomes. The families were generally satisfied with the intervention outcomes, and met their pre-stated intervention goals with a high degree of success. Even the goals that were not met were unanimously described as "important" in the post-intervention interview by all families, suggesting that the proposed outcome was socially valid even if the goal was not met. This study supports previous studies describing outcomes for

Latinx caregivers within adapted naturalistic communication interventions, where caregivers also reported satisfaction with outcomes (Ijalba, 2015; Peredo et al., 2018). Multiple sources of data suggest that the caregivers perceived the outcomes of the intervention to be meaningful.

What elements of the intervention goals, procedures, and outcomes require future adaptation?

Goals. The goal-setting process for this intervention was collaborative; however, in interview one and throughout the sessions, caregivers posed concerns about their child's behavior, such as aggression, difficulty with toilet training or motor skills. These developmental questions were not addressed in the intervention, which may suggest that the intervention did not meet all of the caregiver's goals for participating in the intervention. The program director, in her field notes, frequently noted that intervention sessions include lengthy conversations about such topics that were not planned ahead of time, a theme that reappears in other data sources such as the pre-intervention interview where families discuss their concerns about their children. The caregivers may have had some unstated goals for the more general support of their child that the intervention did not address. The literature suggests that while Latinx caregivers find expressive communication important for young children, they may place behavior needs with equal or higher priority (Cycyk & Hammer, 2018).

The caregivers had additional questions related to raising bilingual children that were not included in the previous iterations of the program. While the implementers discussed home language use and bilingual development when caregivers had questions, no dedicated information was included in the curriculum on this topic or in the goals of

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the intervention. Considering these caregivers speak Spanish in an English-dominant culture, a more socially valid approach would be to include specific curriculum related to bilingualism and how to implement the target strategies in bilingual contexts.

Procedures. Across the data collected, there were aspects of the intervention procedures that showed less social validity, including the following: attendance, length of intervention, individual sessions, use of technology, environmental arrangement, bilingual development in curriculum.

Attendance. While the attendance was relatively good, there were still many concerns about scheduling that may have affected the accessibility of the intervention to families. Despite these concerns, many of the caregivers scheduled and attended make-up sessions, which shows their commitment to the intervention. Many of the families were managing work schedules as well as other children to care for, which was an additional barrier. Barriers to attendance can affect treatment fidelity, and rather than being a consideration specifically for Latinx caregivers, it is a barrier to consider for caregivers of all cultural backgrounds who are low income (Chin & Teti, 2013). Participating families gave scheduling suggestions across all times of the day, and there is no evidence that a certain schedule is more socially valid for Latinx families.

Length of intervention. A common thread across the focus group, free responses to caregiver satisfaction survey, and the program director's field notes was the caregivers requesting a longer intervention to fully understand the strategies. In the focus group for example, several participants agreed on the idea that they needed more time to fully put the strategies into practice. Similar conclusions were drawn by researchers who piloted the EMT en español program, where the social validity data suggested that the families

thought the intervention was too complex for the amount of time they had (Peredo et al., 2018). While CI-NCIs generally have lengths between one and three months (Roberts & Kaiser, 2011), it may be more appropriate for this population to have longer term interventions.

Individual sessions. The families responded positively to the group format of intervention but were generally reported that they were more interested in the group sessions than to the individual breakout sessions. The individual breakout sessions may be more important to a family who comes from a more individualistic culture, as they may want information tailored to their child. However, as Latinx caregivers tend to identify with a more collectivist mindset (Vargas & Kemmelmeier, 2013), the perspectives of other families in the group may be of more importance to them than the chance to share one-on-one with their coaches.

Use of technology. The participants had difficulty with technology, and generally reported that the technology was either too complicated to use, or that they could not capture the routines in the way they hoped. In both the focus group and the field notes, the technological difficulties were discussed at length. It is possible that the instructions were not very clear, and need to be simplified. There is also the possibility that the participating caregivers had limited exposure to the type of technology used, and needed either more time for instruction, or to provide technology specific to what they already have or know how to use. Clinicians could also consider giving more specific, contextualized examples of how and when to record the routines.

Strategies. Not all of environmental arrangement strategies implemented in the intervention did not seem appropriate for these families. For example, in the focus group

and post-intervention interview, *in sight, out of reach* was discussed as inappropriate by one mother, and one other caregiver reported lack of use. A similar strategy taught in the intervention *assistance*, where the caregiver creates purposeful situations for the child to ask for assistance, such as moving a stool away from the sink so that the child needs to ask you to help them wash her/his hands. While *in sight, out of reach* was discussed as possibly inappropriate or dangerous, the *assistance* strategy was not discussed in the post intervention focus group, and the majority of families reported that they did not know it or use it in the post intervention focus group. These strategies require caregivers to make changes to the way they arrange the home and follow the child's attempts to communicate. If the family structure does not allow for children to be the focal point of interactions these strategies may be difficult to implement (Cycyk & Huerta, in press). The *in sight, out of reach* and *assistance* strategies in particular were not socially valid for some of the caregivers participating in the intervention. This may be remedied through further education on the strategy, or more specific coaching on when these strategies could be used in a more familiar context.

Outcomes. While the caregivers were highly satisfied with intervention outcomes, they made requests for future support as the children grow and enter the school system. This suggests that while they may have been satisfied with the outcome of the intervention, their expectations for exiting the program may not have been met in terms of continued support. Future iterations of the program might include information on local preschools and community resources, as well as have a more structured plan for keeping in contact with families as they move forward.

CHAPTER VI
CLINICAL IMPLICATIONS

The results of this study lead to clinical implications for the cultural adaptation of caregiver-implemented naturalistic communication interventions for Latinx caregivers. Speech Language Pathologists are tasked with meeting the needs of their diverse patients in accordance with the World-Health Organization International Classification of Functioning (WHO-ICF). The WHO-ICF model involves clinicians providing family-centered services, which include contextual factors such as the child's culture and environment (2001), yet many professionals may not know where to begin in understanding the child's culture and environment. The process begins with asking open-ended questions to gather information regarding the roles of different family members, the caregiever's parenting styles, and expectations. The subsequent section offers clinicians some potential areas of focus in making adaptations to improve the social validity of similar programs. However, this only serves as a preliminary framework for thinking of potential adaptations to consider. Each family within a culture is entirely unique, so the following suggestions should only serve as preliminary directions in adapting interventions to match the goals, priorities, and perspectives of Latinx caregivers.

Parental agency. Latinx families, depending on their level of acculturation and family communication style, may not be as comfortable with strategies that place more individual agency on the child, such as arranging the environment specifically for the child (such as *in sight, out of reach*), or encouraging caregivers to "follow the child's lead" or give choices (Tamis-LeMonda et al., 2012). When using these strategies with families, consider adjusting the strategies to include an element of parental authority. For

example, with the *in sight, out of reach* strategy, caregivers could be coached to find an item that is preferred by both the parent and child, such as a favorite book instead of a noisy toy truck. With "choices" it may be useful to coach caregivers on specific times when this could be utilized, such as choosing one or two apple slices instead of having the child choose what clothing to wear, as the parent might not find this to be an appropriate responsibility for a child (Cycyk & Huerta, under review).

Include extended family. As Latinx families may differ in family roles, there could be siblings or extended family who the primary caregiver considers to be responsible for teaching the child language (Cycyk & Hammer, 2018). Caregivers in this study reported to share information with spouses and extended family. This was also the case for EMT en español study, where two out of three participating caregivers in the intervention reported that they taught the strategies to other family members to use with the child (Peredo et al., 2018). It is important to determine whether this may be important for participating families and if so, include other members of the family in learning the intervention strategies through inviting them to participate, and creating a family-friendly atmosphere where siblings are welcomed.

Home language use. The participating caregivers in the present intervention as well as Latinx caregivers interviewed in previous studies (Cycyk & Hammer, 2018) identified Spanish language use by intervention implementers to be an important component of the intervention. When written materials are translated, an iterative and collaborative translation process should take place involving native Spanish speakers with knowledge of the dialect(s) used in the group (Douglas & Craig, 2007). When no

Spanish-speaking clinicians are available, it is important that interpreters are provided (Kummerer & Lopez-Reyna, 2007).

Address global developmental concerns. Clinicians should be willing to tailor curriculum to address caregiver concerns that may not directly be addressed by curriculum. For example, including information on bilingual development, motor skills, toilet training, etc. Caregivers participating in this study had unique concerns about language learning, such as whether they should speak Spanish or English at home, and whether watching television in English will help their child learn English. Clinicians should be prepared to discuss these unique concerns at length with families. Additionally, Latinx families may place equal or superior importance on a child's behavior to their communication (Cycyk and Hammer, 2018). This priority should be identified by clinician, and the caregiver should be given opportunity to voice these concerns. Clinicians should counsel caregivers on how behavior issues often relate to a child's communication difficulties and train caregivers to identify what a child is attempting to communicate through an "undesirable" behavior. This may be an area of potential cross-disciplinary collaboration between Speech Language Pathologists and Early Interventionists in order to addresses development from a more global lens.

Flexible idea of time. The participants in this intervention discussed issues with scheduling for reasons such as employment obligations or managing other children. The program directors had to adopt a flexible idea of scheduling, avoiding a "fixed" start/stop time to allow for families who needed to come late and arrive early, as well as offering make-up sessions to those who needed it. Furthermore, this may allow for a buffer time for families and interventionists to discuss global developmental topics mentioned above.

An additional factor to consider is that since all caregivers self-reported as low-income, flexible time may be important with any low-income family, as being low-income does not directly relate to being Latinx. However, poverty is a challenge that at least ⅓ of Latinx families in the US face (Murphy et al., 2014). Pre-intervention interviews might include ideal time-slots to make scheduling easier, and implementers should be sensitive to the caregiver's scheduling needs.

Limit complex technology. While the use of video and audio recording may be a powerful teaching tool, implementers must be sensitive to the caregiver's exposure to, and familiarity with, technology. An implementer may consider providing a family with the option of doing a video recording during a home visit, or in an intervention session, to avoid technical difficulties. The parent may also be concerned with the child's behavior during the video, in which case the clinician should be sensitive to offering multiple opportunities to tape routines.

Offer long-term relationship building. The participating families requested continued support from intervention implementers. They also requested a longer intervention, and to be invited back for future classes with the same group. This identifies a potential desire for collective support and relationship building that Anglo-American families who may have a more individualistic mindset might not request. Previous studies have identified collectivist mindsets held by traditional Latin American families (Vargas & Kemmelmeier, 2013) that could be considered a strength in building long-term, supportive relationships among families and implementers. Additionally, due to limited availability of programs in Spanish, Latinx caregivers who attend may not have access to any other Spanish-speaking professionals. Professionals must be prepared to fulfil unique

a role in advocating for families and providing them with information and community

resources.

CHAPTER VII
LIMITATIONS AND FUTURE DIRECTIONS

As with any pilot study, there are several limitations to consider. First, the sample size and relative homogeneity of the participants limits the generalizability of the results obtained from this study. All eight of the participating caregivers were Mexican immigrants living in the same geographic area of the United States who had familiarity with early intervention. In addition, the age range of the primary caregivers (39-47 years) should be considered, as younger groups of caregivers may respond differently to CI-NCIs. The results of this study should be interpreted with caution, as the experiences of these few caregivers will not reflect the views of the diverse Latinx population in the United States as a whole. Future research should be conducted in many geographic areas, and include caregivers of varying ages and gender identities from many Latin American countries.

An additional limitation to consider is that the data was not compared to a "control", or in this case, an un-adapted intervention to determine whether the adaptations increased the social validity. However, considering all but one of the participating families did not speak English, the original intervention would not have been appropriate or ethical to provide. Future research directions include comparing the outcomes of culturally adapted programs to those that are not adapted.

While the families were not made aware of the study until the final intervention session and were given the option to not participate, there is a potential limitation of participant response bias, particularly on any data collected post-intervention, such as the focus group and caregiver satisfaction survey. The caregiver satisfaction survey was made anonymous to help eliminate pressure for participants to respond in a certain way,

and this may have helped to reduce this bias. In the focus group, participants were told they would be deidentified, and using an outside moderator may have helped limit any reservations the participants felt about giving negative feedback. Future research should include protections for participant response bias, such as anonymity and well-outlined informed consent procedures. It should also be acknowledged that the more collectivist mindset held by culturally Latinx individuals may cause them to place the opinion over the needs of the group (Vargas & Kemmelmeier, 2013), which may have kept some individuals from voicing opposing views. This reinstates the need for multiple data sources, including anonymous ones, such as the caregiver satisfaction survey.

In analysis of qualitative data such as the focus group, there is the potential for confirmation bias. This was limited as much as possible through creating and refining a codebook through an iterative process and running interrater reliability tests. Future qualitative research on similar topics may avoid this risk by having multiple coders who are blind to the study and its objectives.

CHAPTER VIII
CONCLUSION

This thesis offers preliminary evidence towards the social validity of caregiver-implemented naturalistic communication interventions adapted for families from Spanish-speaking Latinx backgrounds. Goals, procedures, and outcomes of an adapted caregiver-implemented intervention were described through methods that looked at caregiver responses to the intervention quantitatively through attendance and satisfaction ratings as well as qualitatively through interviews with participants, field notes and a post-intervention focus group. Results offer preliminary support for the social validity of this intervention alongside suggested adaptations to improve the social validity of future iterations of the program. Many of the intervention goals, procedures, and outcomes were perceived as both acceptable and appropriate by families. The caregivers particularly benefited from the delivery of intervention and written materials in Spanish, the group format allowing connection and sharing with other families, and the parental agency the routines-based intervention offered. This thesis examines social validity with a depth that is unique from existing literature and provides a potential framework for interventionists attempting to adapt current programs to increase social validity.

APPENDIX A: INFORMED CONSENT DOCUMENT

CONSENT FORM
LAPE en español: **A Pilot Study**
IRB Protocol #: 01242018.037

You are invited to take part in the research study entitled "*LAPE en español*: A Pilot Study". You are chosen as a possible participant because you and your child are participating in the *LAPE en español* program. Around 6-12 caregivers and their children who participated in *LAPE en español* will take part in this study.

The primary purpose of this study is to learn about how participation in *LAPE en español* helps to support young children with communication concerns and their families from Latino, Spanish-speaking backgrounds. Another pupose of this study is to learn if assessment tools developed by members of the study team appropriately measure the communication skills and experiences of children with communication concerns from Spanish-speaking backgrounds.

This study is being conducted by the following members of the Communication Disorders and Sciences Department at the University of Oregon: Lauren Cycyk, Ph.D., Heather Moore, Ph.D., Stephanie De Anda, Ph.D., and Lidia Huerta, M.H.S.

Before agreeing to participate, please read this form. Please ask any questions you may have.

If I agree to take part, what will I be asked to do?
- Allow us to use the assessments you have already completed during the *LAPE en español* program and those you may complete in the follow-up session for research purposes, including:
    - Questionnaires about your child and family, your confidence, and your experience with *LAPE en español*
    - LAPE Communication Interviews I, II, III, and IV
    - The Language Exposure Assessment Tool
    - The adapted Spanish-English MacArthur Communicative Development Inventories, which has been authored by the researchers of this study and could be a marketable assessment tool in the future
    - Video recordings of your Home Routine Samples
    - LENA Digital Language Processor audio recordings of the home
- Allow us to use the following information about your child that we obtained through documents given to us by Early Childhood CARES at the start of *LAPE en español* for research purposes (see separate form entitled, "Authorization to use or disclose heatlth information that identifies you for a research study"), including:
    - Your child's gender and birthdate
    - The type, frequency and duration of early intervention services your child receives
    - Your child's diagnosis/disability and areas of delay (e.g., communication delay, cognitive delay)

- Participate in a one-time focus group with other caregivers participating in *LAPE en español* in which you can share your thoughts on the program. This focus group will last no more than 1.5 hours and will be audio recorded.

Is there any payment for participation?
- You will be provided a $50.00 gift card after completion of the focus group.
  - If you do not complete the focus group, you will not receive the gift card.
  - The focus group may include refreshments, transportation costs, and childcare.

How will things I say be kept private and confidential?
- The records of this study will be kept private and confidential.
- The records of this study will be kept in secure locations that only members of the research team will be able to access. Sometimes the University of Oregon's Institutional Review Board might ask to see the information. They want to make sure that everybody who takes part in the study is safe and treated with respect at all times. They are trained to protect privacy.
- Your name and the name of your child or family members will not be associated with any of the records of this study. The research project uses random numbers instead of names for all the information it collects and analyzes. Your names will also be kept private when the results of this study are shared for papers and presentations.
- The records of this study will be destroyed approximately 5-7 years after this study has been completed; however, the research data you provided will be kept by the research team with no connection to your identity.
- This project has no connection to the Immigration and Customs Enforcement Agency (ICE) and does not share information with ICE or any other governmental agency for any reason.

What are my rights?
- I have the right to change my mind about being in this project at any time.
- If I decide to stop participating in the project, there will be no negative results.
- My participation in this study will not affect the current or future services my child or family receives or will receive from Early Childhood CARES, the UO HEDCO Clinic, or the University of Oregon in any way.
- I will be given a copy of this form for my records.
- I can talk with someone outside the project if I have questions or concerns about the project. I can also ask about my rights as a research participant.

Who can I contact if I have any questions?
- You can call Lauren Cycyk, who is the primary researcher in charge of this study. Her phone number is (541) 346-2149 or (302) 563-6678. You can also email her at lcycyk@uoregon.edu. She speaks Spanish.
- If you have any questions about your rights as a person taking part in the study, you may call: Research Compliance Services at 541-345-2510 or email ResearchCompliance@uoregon.edu.

What are the risks of being in the study?
- The research team will collect personal information about you, your child, and your family. We take several measures to ensure that your personal information is safe and

private. Even so, there is the small chance that someone who should not see your information might see it.

- Other caregivers taking part in *LAPE en español* or staff of Early Childhood CARES may learn that you participated in this study and may share your personal information.
    - You can help protect your privacy and the privacy of other caregivers participating by not sharing information with individuals who have not participated in *LAPE en español* or this study.
- Moreover, the research team may use your video recordings to share results of the research during presentations. It is possible that an audience member of these presentations recognizes you or your child and learns you have participated in research.

What are the benefits of being in the study?

- There are no direct benefits to you for participating in the study beyond the benefits you noticed from participating in *LAPE en español*.
- However, we believe the information you provide will make an important long-term contribution to the *LAPE en español* program to strengthen the services provided to young children and their families from Latino, Spanish-speaking backgrounds.

PLEASE CAREFULLY READ THE FOLLOWING

I have read the information on this consent form or it has been read to me. I have had an opportunity to ask questions, and all of my questions have been answered. I know the information I share during this study will be kept private and confidential to the best of the research team's abilities.

Participant Initials: _____

By signing below, I agree to take part in the "LAPE *en español*: A Pilot Study " research project. I consent to the use information collected about me, my child, and my family during *LAPE en español*, including audio and video recordings, for this research study. I understand that I can withdraw my consent at anytime and that my participation will not affect the services provided by Early Childhood CARES or the University of Oregon. With my signature, I also verify that I am at least 18 years of age and have received or will receive a copy of this consent form to keep.

_____
Name of Participant (Please print clearly)

_____
Name of Child (Please print clearly)

_____   _____
Participant's Signature   Today's Date

Finally, I am indicating my preferences below for future contact related to *LAPE en español*, this research project and future research projects. My initials indicate my consent to be contacted by members of the *LAPE en español* research team regarding:

_____ LAPE *en español* Maintenance Session (2-3 months from today's date)

_____ Questions related to the current research study

_____ Opportunities to participate in future research studies

_____ None of the above – I do not wish to be contacted in the future

_____ _____

Participant's Signature   Today's Date

Signature of Investigator: _____   Date: _____

Family Members Present (please list and indicate if they arrived or left early or left for

any substantial time during the session):

Child's EI Provider Present? (yes or no; please indicate if they arrived or left early or

left for any substantial time during the session):

General Impressions of Primary caregiver (name: _____): Take

notes during the session and then check boxes after the session.

During this session, this caregiver (check all that apply):
1 Appeared comfortable at all times 1 Was Nervous/shy to start, but become
comfortable as the session went on   1 Appeared uncomfortable throughout 1 Was on-
task, paying attention 1 Was often off task, made unrelated comments 1 Other:
_____
Notes:

During this session, this caregiver participated (check all that apply):
1 Very often   1 Often   1 Occasionally 1 Only when asked, but appeared happy to do
so 1 Only when asked and didn't appear to want to participate 1 Other:
_____
Notes:

This caregiver (check all that apply):
1 Appeared to be understanding the information provided   1 Needed some help
understanding the concepts presented 1 Needed a lot of help to understand the concepts
presented 1 Did not appear to fully comprehend the concepts presented 1 Other:
_____
Notes:

General Impressions of Secondary caregiver (name: _____): Take

notes during the session and then check boxes after the session.

During this session, this caregiver (check all that apply):
1 Appeared comfortable at all times 1 Was Nervous/shy to start, but become comfortable as the session went on   1 Appeared uncomfortable throughout 1 Was on-task, paying attention 1 Was often off task, made unrelated comments 1 Other:

_____

Notes:

During this session, this caregiver participated (check all that apply):
1 Very often   1 Often   1 Occasionally 1 Only when asked, but appeared happy to do so 1 Only when asked and didn't appear to want to participate 1 Other:

_____

Notes:

This caregiver (check all that apply):
1 Appeared to be understanding the information provided   1 Needed some help understanding the concepts presented 1 Needed a lot of help to understand the concepts presented 1 Did not appear to fully comprehend the concepts presented 1 Other:

_____

Notes:

Parent Report Notes: (take notes here on what the parent reported about child skills,

child's progress, parent's use of strategies/ skills, related information about things that

occurred since the last session, etc.)

Things to remember/prepare for next session:

**Language and Play Everyday (LAPE)
Satisfaction Survey**

Thank you for answering the questions on this form <u>openly and honestly</u>. Your responses will help us improve the LAPE program for children and families in the future.

Do not put your name on this questionnaire. Your answers will be kept anonymous and confidential. When you are done, please put the questionnaire in the envelope provided.

Please use the following rating scale to complete the questionnaire; **circle the best answer for each item**.

       1: I **strongly disagree** with the statement.
       2: I **disagree** with the statement.
       3: I **somewhat disagree** with the statement.
       4: I do not agree or disagree with the statement.
       5: I **somewhat agree** with the statement.
       6: I **agree** with the statement.
       7: I **strongly agree** with the statement.

Question	Rating (Please circle) Strongly Strongly Disagree Agree
1. Language and Play Everyday (LAPE) was effective for increasing my child's communication skills across daily home routines.	1 2 3 4 5 6 7
2. LAPE was effective for increasing my child's communication skills in settings outside the home.	1 2 3 4 5 6 7
3. LAPE was effective for increasing the number of words, signs, or gestures my child uses.	1 2 3 4 5 6 7
4. The strategies taught through LAPE were easy to use with my child throughout the day.	1 2 3 4 5 6 7
5. The strategies taught through LAPE matched my beliefs, values, and priorities for child-rearing.	1 2 3 4 5 6 7
6. The duration of each LAPE session was appropriate (2-hours per session).	1 2 3 4 5 6 7
7. The duration of the whole LAPE program was appropriate (11 sessions).	1 2 3 4 5 6 7

8. I would recommend LAPE to other parents.	1 2 3 4 5 6 7
9. I learned new information about communication skills and strategies in LAPE.	1 2 3 4 5 6 7
10. The LAPE program took into account my individual family's strengths and needs.	1 2 3 4 5 6 7

Name up to three things that you enjoyed about the LAPE Program:
1.
2.
3.

Name up to three things that you would change about the LAPE Program:
1.
2.
3.

Is there anything else you would like us to know that might help to improve the program for future children and families that might participate in LAPE?

APPENDIX D: FOCUS GROUP SCRIPT

I.   Welcome and Introduction:

Thank you for attending this focus group today. We are very excited to hear your valuable thoughts about the LAPE en español program. The purpose of this focus group is to learn your opinions on how we can improve LAPE en español to best support the communication development of young children from Spanish-speaking, Latino backgrounds who have communication difficulties and their families.

As a reminder, this focus group is not a part of the traditional LAPE en español program. Because this is the first year that we have offered this program to children and families from Spanish-speaking, Latino backgrounds, we are really eager to hear your honest thoughts, including what you liked and what you didn't like about the program.

We will be audio recording this focus group so that we can carefully review your thoughts later, as part of the research project associated with LAPE en español this year. We have copies of the consent form you signed previously if you would like to review the details of the focus group and this study. Please let us know if you have any questions related to the research project.

[Moderator passes out the consent forms for families to review as needed]

II.   Explanation of the Focus Group Process

Now, I want to explain a bit more about the focus groups. Has anyone participated in a focus group before? Focus groups are being used more and more to learn from families about how to best support their children. Please understand that we are trying to gather information; there are no right or wrong answers to the questions we will be asking. You

are free to share whatever opinions you have about this topic, and you don't have to

agree with others in the group.

The focus group will last about one hour. There are a few ground rules to help the

focus group to be a success. All of the information we share should be kept confidential

in this group. You can help to maintain confidentiality by not sharing what we talk about

here with anyone who did not participate today. As a reminder, you do not have to

answer every question. Also, please turn off your cell phones if possible. Help yourself to

refreshments and feel free to use the bathroom when needed. Any questions?

III.   Begin Focus Group:

It looks like we are ready to begin the focus group. We will turn on the recorder now.

[Moderator turns on the audio recorder]

Let's start with some questions regarding how the program was organized.

(1) LAPE en español is currently scheduled for a total of 11 sessions over approximately

3 months. How do you feel about the length of the program?

(2) As you know, the sessions for LAPE en español primarily take place in a group with

other caregivers with the addition of a few individual sessions. How do you feel about the

focus on group sessions? And the use of individual sessions?

(3) Is there anything else we should know about the organization of the LAPE en español

that would be helpful to make the program more successful in the future?

Thank you for your thoughts. I would like you to think now about the purposes of LAPE

en español and your goals for attending.

(4) Why did you decide to participate in LAPE en español?

(5) How did you imagine that LAPE en español might benefit your child, yourself, or your family? In other words, what were your goals for LAPE en español?

(6) How do you feel that LAPE en español met or did not meet your expectations?

(7) Do you believe that LAPE en español will or has made things better for your child and/or your family? Why or why not?

Now think about the parts of LAPE en español that you, your child, and your family liked best.

(moderator passes out "communication opportunities" worksheet)

(8) Out of the strategies we taught: waiting, giving choices, something new or different, piece by piece, "in view out of reach", which one(s) were more comfortable for your family's communication style?

(9) In general, what are the strengths of LAPE en español? In other words, what should we continue to do to support children and families from Spanish-speaking, Latino backgrounds?

Great! Now think about the parts of LAPE en español that we could improve to better children and families from Spanish-speaking, Latino backgrounds.

(10) Out of the strategies we taught: waiting, giving choices, something new or different, piece by piece, "in view out of reach", which ones were least comfortable for your family's communication style?

(11) In general, what are the weaknesses or limitations of LAPE en español?

(12) What barriers (of any type) could be removed to increase participation of children and families from Spanish-speaking, Latino backgrounds in LAPE en español?

PROMPT FOR MODERATOR: If the caregiver(s) does not mention any barriers

related to culture, language, socioeconomic resources, setting/location, or transportation,

ask the following for each:

Did you feel _____ *(*fill in from list above*) was at all a barrier for*

participation or could be improved in some way?

Thank you for sharing. We really appreciate your honesty. We have reached the end of

the focus group. Thank you all for your time and for sharing your thoughts. To thank you

for your participation, you will all receive $50 gift card.

[Moderator passes out gift card and gift card receipts for participants' signatures]

Parent Code:	Child code	Definition:
LID		*Longer intervention desired*- This code should be used when a participant expresses a desire for a longer duration of the LAPE EN Español intervention program due to reasons such as wanting more practice, or wanting time to master the strategies.
ALI		*Agreement with length of intervention*- This code should be used when a participant expresses that the three months of intervention was suitable for them/ their child/ their family.
CSD	CSDM: Morning CSDA: Afternoon CSDE: Evening	*Change of schedule desired*- This code should be used when a participant expresses that a different schedule, or time of day, would have been better for them or their child. If they do not specify what time would be ideal, use parent code DCS. If the participant expresses a particular time of day that would be ideal, use corresponding child code to indicate which time.
EDS	EDSP: Piece By Piece EDS1: Plus 1 EDSW: Wait EDSI: In sight, out of Reach	*Expressing difficulty learning or implementing a strategy*- This parent code should be used when a participant expressed difficulty with a strategy taught in the LAPE program, or if they express that they wanted more practice with a particular strategy. This code also applies when a parent incorrectly describes a strategy. If they do not specify which strategy, use code EDS. If they mention an LAPE strategy, use the corresponding child code to indicate which strategy.
EUS	EUSP: Piece by Piece EUS1: Plus 1 EUSW: Wait EUSS: Do something Silly EUSI: In sight, out of Reach	*Expressing use of a strategy*- This code should be used when a participant expresses that they use a strategy taught in the LAPE program. If they do not specify which strategy they use, put parent code code EUS. If they name a specific LAPE strategy, use the corresponding child code to indicate which strategy.
PFS	PFS1: Plus 1 PFSP: Piece By Piece PFSI: In sight, out of reach PFSW: Wait	*Preference for a strategy*- This code should be used when a participant expresses that they prefer one strategy over others taught within the intervention program. The parent code, PFS, Should always be applied when a preference is discussed. Then, choose the child code that corresponds with the participant's preference.

SGF	SGFL- Learning strategies from other parents that support development	*Satisfaction with group format*- This code should be used when a participant expresses satisfaction with the group format of the intervention. If they do not specify their reason, use parent code SGF. If they specify the reason they enjoyed the group format, use corresponding child code.
SIB	SIBH: Home Visit SIBI: Individualization of Program SIBO: Other	*Satisfaction with individual breakouts*- This code should be used when a participant expresses satisfaction with the individual breakout sessions in the program. If they do not specify the aspect of the individual sessions they enjoyed, use parent code SIB. If they specify the reason they enjoyed the individual format, use corresponding child code.
DIB		*Dissatisfaction with individual breakouts*- This code should be used when a participant expresses dissatisfaction with the individual breakout sessions and/or home visit in the program.
DWT	DWTC: Child's performance DWTA: Adult's difficulty with use/instructions or timing	*Dissatisfaction with technology/recordings*- This code should be used when a participant expresses a difficulty with the technological aspects of the program, such as the video or audio recording. If they express difficulty but do not identify which aspect was difficult, use parent code DWT. If they specify whether the difficulty was due to either the child's performance or the parent's difficulty with use/instructions, ise corresponding child code. At times, both child codes may be applied to a single quote.
SWM		*Satisfaction with written materials*- This code should be used when a participant expresses satisfaction with the handouts provided during the program.
RPP	RPPF: Flier received RPPG: Enjoys group classes RPPI: Information from interventionist/ EI provider RPPL: Learning more about child's diagnosis RPPS: Learning new strategies to support	*Reasons for participating in program*- These codes should be used when a participant expresses their reasons for choosing to participate in the intervention. The parent code, RPP, should always be applied, then matched with the appropriate child code, as all reasons for participating should be specified. More than one child code may be applied to a single quote.

	development RPPC: Socialization with other children RPPO: Other	
UPL		*Understanding of program logistics*- This code should be used when the participant expresses that they understood the format and objectives of the intervention program. Logistics refers to the separate classes for children and parents or the methods of teaching.
MPL		*Misunderstanding of program logistics*- This code should be used when the participant expresses that they did not understand the format and objectives of the intervention program. Logistics refers to the separate classes for children and parents or the methods of teaching.
MPC		*Misunderstanding of Program Content*- This code should be used when a parent misunderstands the general purpose or the content within the program. For example, if they thought the intervention would help with potty training instead of communication, MPC would be applied. The same goes for if a parent thought the intervention was for articulation/speech sounds instead of communication.
EOP	EOPM: Met expectations EOPE: Exceeded expectations EOPD: Did not meet expectations	*Expectations of program:* This code should be used when a participant describes their expectations regarding participation in the intervention program, and whether or not those were met. The parent code, RPP, should *not* be used, and all discussion of expectation should be coded with one of the child codes outlined in the left-hand column.
SWO	SWOC: Child's communication and/or vocabulary SWOP: Parent's abilities and/or learning SWOS: Satisfaction with strategy(s) SWOA: Child advancement in socializing.	*Satisfaction with outcomes*- This code should be used when the participant expresses satisfaction with the program, that they benefited from the intervention in some way, or that the program met their expectations. If the parent describes a specific area where either they or the child benefitted from the intervention, use the corresponding parent code outlined in the left-hand column.

	SWOO: Program overall, or other	
SALF		*Strategies were appropriate for Latino families*- This code should be used when a participant expresses that the strategies (or a specific strategy) were (was) appropriate for Latino families.
PALF		*Program was appropriate for Latino families*- This code should be used when a participant expresses that the program in general was appropriate for Latino families.
FPS	FPSR: Recruit more families FPSI: Invite families to participate again FPSS: Continue providing Spanish program FPST: Transport FPSF: Further support as child grows FPSO: Other	*Future program suggestions*- This code should be used to identify suggestions for the improvement and/or continuation of the intervention (Note that this code does *not* include scheduling issues, which should be classified under parent codes CSD or LID). Three child codes in the left-hand column describe four different categories of suggestions. Use the code that most closely relates to the suggestion.

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