THE ASSESSMENT AND TREATMENT PRACTICES

OF SPEECH-LANGUAGE PATHOLOGISTS IN

MEXICO

By

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A Thesis for the Degree

Master of Science

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Thesis Approved by:

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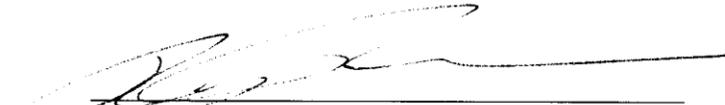
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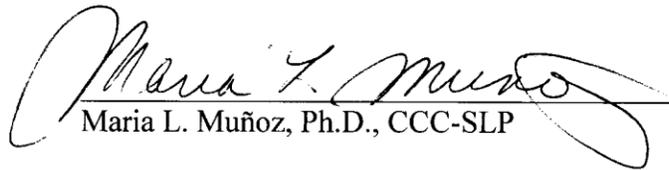
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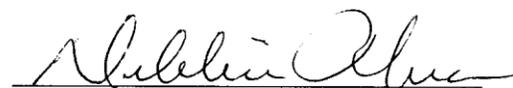
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Chapter I

Literature Review

Introduction

It is estimated that 6.3% of school-aged children in the United States (US) are identified as having some form of a communication disorder (Zimmerman, Satterfield, Miller, Bilder, Hossain, & McMahon, 2007). For the majority of these children (i.e., monolingual English speakers), speech-language pathologists (SLPs) have developmental milestones and assessments on which to base diagnoses (Prezas & Hodson, 2007). In contrast, normative data regarding children who speak other languages (e.g., Spanish) are sparse. Although the exact percentage of monolingual Spanish and bilingual Spanish-English children with communication disorders is not known, there has been an increase of Spanish-speaking population in recent years.

In 2000, the US Census Bureau (USCB, 2000) reported that approximately 87 million persons were from minority backgrounds living in the US, representing a 43% increase from 1990. More specifically, the USCB (2010) has reported that the influx of Hispanics from 2010-2050 will increase from 47.8 million to 132.8 million. The USCB estimates that Hispanics will represent 24.4% of the total population in the US by the year 2050. Therefore, it is not surprising that Spanish is the second most spoken language in the US aside from English (CensusScope, 2000). These data, and the fact that Latino-American preschool children represent the largest group of second language learners in US schools (Bedore & Peña, 2008), suggest a need for additional information regarding identification, assessment, and treatment procedures for this population. One possible way to gather this information is to investigate the clinical practices of professionals in

other Spanish-speaking countries. Given that more than 66% of the Hispanic population in the US is of Mexican descent (Ramirez & de la Cruz, 2003), an understanding of the state of the profession in Mexico (e.g., scope of practice, assessment, identification) may prove informative to monolingual and bilingual SLPs working with children of Mexican descent in the US (e.g., Mexico). This information would provide insight into the aspects of working with Spanish-speaking children and their families.

Speech-Language Pathology in the US

The profession of speech-language pathology has been described as an individual's ability to diagnose, evaluate and provide treatment to aid in the prevention, assessment, and treatment of communication disorders, such as speech, language, cognition, voice and fluency (Bureau of Labor Statistics, 2010). The American Speech-Language-Hearing Association (ASHA; Council on Academic Accreditation) is an organization responsible for overseeing professional, scientific, and credentialing members and affiliates in the professions of audiology and SLPs in the United States and internationally (ASHA, 2011). Depending on the state's requirement, the Certificate of Clinical Competence in Speech-Language Pathology (CCC-SLP), which is awarded through ASHA, may be necessary to obtain. To obtain such a credential, requirements include obtaining a degree from an accredited college or university, passing a national examination on speech-language pathology offered through the Praxis Series of the Educational Testing Service, hours of supervised clinical experience, and 9 months of postgraduate professional clinical experience (Bureau of Labor Statistics, 2010). Renewal and maintenance of certification (i.e. CCC-SLP) includes obtaining 30 credit hours over the course of three-years (ASHA, 2005). Finally, licensing requirements vary by state in

the US; states for which a license is required to practice, a Master's degree is necessary (Bureau of Labor Statistics, 2010).

As stated by ASHA (2007), SLPs provide services to individuals and their families from a variety of diverse linguistic and cultural backgrounds. Services are preferred to be provided based on applying the best available research evidence, using expert clinical judgments, and considering clients' individual preferences and values. Depending on the work setting, professionals generally can provide services to numerous disorder areas (e.g., articulation/phonology, expressive and receptive language, fluency, aphasia, and dysphagia).

In the US, SLPs are able to work in a variety of clinical settings. According to ASHA (2007), practice settings may include any of the following: public and private schools, private clinics, health care settings, early intervention settings, universities and research facilities, among others. Furthermore, SLPs may serve as educators to educate the public and provide in-service education, as administrators in clinical and academic programs, and as researchers to conduct investigations in communication sciences and disorders.

Identification, Assessment, and Treatment of Spanish-speaking Children in the US

Teachers in the school system may refer children of limited English proficiency for speech-language testing if speech, language and/or learning problems are suspected (ASHA, 2009). Part of the challenge of properly identifying Spanish-speaking children for services is that there are few assessment instruments specifically designed for non-native English speakers (Skahan, Watson, & Lof, 2007). Standardized tests available in Spanish include the following: *Spanish Articulation Measures* (Mattes, 1987), *Contextual*

Probes of Articulation Competence Spanish (CPAC-S, Goldstein & Iglesias, 2006), the

Hodson-Prezas Assessment of Phonological Patterns in Spanish (Hodson & Prezas,

2010), the *Clinical Evaluation of Language Fundamentals- Fourth Edition (CELF-4)*

Spanish Edition (Wiig, Secord, Semel, 2006), and the *Preschool Language Scale-Fourth*

Edition (PLS-4) Spanish Edition (Zimmerman, Steiner, & Pond, 2002). However, some

of these tests are direct translations from the English version of the test. In effect, the

assumption is language development in Spanish and English follow the same

development progression, which is not necessarily accurate (Gildersleeve-Neumann,

Kester, Davis & Peña, 2008). It also has been reported that SLPs often feel inadequately

trained and supported to meet the unique needs of this growing population (Kritikos,

2003; Roseberry-McKibbin, Brice, & O'Hanlon, 2005).

      The challenge for the SLP is to evaluate the child in a nonbiased manner and to

determine if the child's communication patterns indicate a difference or a disorder

(Kayser, 1989; Roseberry-McKibbin, 1995). It becomes more challenging when a child

exhibits linguistic differences that may mimic, mask, or be confused with other specific

disorders (Anderson, 2004; Guiberson, Barrett, Jancosek, & Itano, 2006). Distinguishing

a communication difference from a disorder may prove to be difficult, particularly in the

absence of appropriate developmental norms or assessment tools. In most cases,

professionals do not feel comfortable assessing children whose primary language is not

English (Skahan, Watson & Lof, 2007). As a result, they may identify a speech-language

delay or impairment due to a lack of familiarity with patterns associated with speech-

language differences. Alternatively, SLPs may be more conservative in referring

bilingual children for speech services resulting in a lack of services for children who need

them (Gildersleeve-Neumman et al., 2008). In effect, limited English proficiency students often are placed into inappropriate service plans due to misdiagnosing (Hamayan & Damico, 1991; Langdon, 1992; Leung, 1993; Mattes & Omark, 1991).

Misdiagnosis can result in the over-identification or under-identification of children with speech-language impairments, both of which are problematic. Over-identification could have several negative effects including unnecessary speech therapy, economic consequences for schools, increasing SLP caseloads, and educational consequences for children due to inappropriate removal from valuable classroom learning (Lidz & Peña, 1996). Under-identification, on the other hand, puts children in need of services at risk for never receiving appropriate services. This may occur when a SLP believes that a child's difference in performance is due to a dialect associated with his race or ethnic group rather than true errors that need to be addressed (Wilson, Wilson, & Coleman, 2000).

Kritikos (2003) surveyed SLPs in the US about their beliefs in terms of assessment to bilingual children. Three domains of assessment were explored: (1) personal efficacy, (2) general efficacy, and (3) the beliefs about the role of bilingual input. Personal efficacy was defined as the belief that one is skilled enough to conduct assessments. General efficacy was described as the belief that most professionals in one's field are skilled enough to conduct assessments. Beliefs about the role of bilingual input was used to see if SLPs interpret data and make decisions when a child comes from a home where a language other than English is spoken. SLPs reported that Spanish (98%) and Chinese (13%) were most often spoken in the homes of their clients. Furthermore, 40% of all respondents reported that they would be less likely to recommend therapy for

a child who came from a home where bilingual input was present, a practice likely to result in the under-identification of children with speech-language impairments. Finally, Kritikos (2003) concluded that additional research and education in the area of bilingualism is needed since many SLPs reported that they did not feel very competent in assessing bilingual clients.

The issue of competency regarding the assessment/treatment of non-English speaking children also has been examined by other researchers. Skahan et al., (2007) surveyed SLPs who assessed non-native English speakers and found that the assessment methods most often used were informal procedures followed by the use of English-only standardized tests. Only 19% of the respondents indicated the use of standardized test from the client's native language, likely due to the lack of standardized tests (Yavas & Goldstein, 1998).

Additional suggestions for assessing bilingual children (without using formal assessments) have been discussed. For example, Peña and Iglesias (1993) recommend a dynamic approach to assess a child's abilities over time rather than collecting information solely from one session. Roseberry-McKibbin (1994) added that other measures may include a questionnaire to teachers and parents, spontaneous speech samples in both languages, and making close observations of the child's functional communication abilities.

Once a thorough assessment has been performed and a child is diagnosed with a speech and/or language disorder, professionals report several considerations regarding treatment. Roseberry-McKibbin (1994) recommends caution when using treatment techniques for bilingual children that primarily work for monolingual English-speaking

children. Instead, treatment intervention should be culturally sensitive and focus on the child's learning style. Furthermore, she suggests having family members more involved in treatment and consider their "cultural attitudes towards communication." In terms of language of intervention, Roseberry-McKibbin recommends providing intervention in the child's primary language. When the SLP is unable to provide services in the child's primary language, the use of paraprofessionals may become important for goal implementation.

Speech-Language Pathology in other Spanish-speaking countries

Another way to gather information about how to better serve Spanish-speaking children is to consider the practices of professionals in Spanish-speaking countries. Highlighting the most valuable tools used by SLPs abroad may better prepare practitioners in the US when assessing and evaluating bilingual and monolingual Spanish-speaking children. Martínez, Cabezas, Labra, Hernández, Cerruti, and Malebrán (2006) reported a comprehensive study of the history of speech-language pathology in South America. Specifically, the countries discussed by the authors were Brazil, Chile, Argentina, Colombia, and Venezuela. Commonalities between these countries exists. For example, the term for speech-language pathology in all of the countries reported is *fonoaudiología*. However, the history of speech-language pathology between countries varies via the establishment of the speech-language pathology degree and the education path. For example, the certification of speech-language pathology in Chile was established in 1958; whereas, speech-language pathology was not recognized in Columbia until 1966. In addition, education requirements vary by country (coursework similarities to the US have been recognized). Martínez et al. (2006) report coursework

material to include anatomy and physiology, voice, and language therapy (among others). Interestingly, basic coursework in Argentina for speech-language pathology includes additional courses (e.g., embryology, linguistics, educational psychology). In Chile, mathematics, psycholinguistics, and biostatistics are common additional courses. Most universities in these countries also offer post-graduate education for a master's or doctoral degree.

Further commonalities of South-American countries with the US were discussed in Martínez et al (2006). Among these commonalities is the scope of practice. Although the descriptions may be worded differently, in general the "fonoaudiólogo" is described as an individual able to assess and rehabilitate individuals in the areas of language, voice, fluency, cognition, dysphagia, and hearing. In addition, some of these countries have laws that describe the job requirements of an SLP. Employment for most of these countries was in the educational and health areas with a few mentions of availability to work in entertainment.

Finally, Martínez et al (2006) reported that all of the South-American countries mentioned have associations/organizations associated with the field of speech-language pathology (for which membership may or may not be required). For example, the "Asociación Colombiana de Fonoaudiología y Terapia del Lenguaje (ACFTL) [Colombian Association of Audiology and Language Therapy]" was founded in Colombia in 1969. The ACFTL requires professionals to register with the association in order to practice. Conversely, the "Colegio de Fonoaudiólogos de Chile" [Audiology and Speech Therapy College of Chile] is an association in Chile that is not legally able to penalize or define the practice of speech-language pathology.

Although information about the history of speech-language pathology in South-America has been provided by Martínez et al (2006), no information is made available regarding assessment and treatment practices of SLPs in these countries. Further information about these Spanish-speaking countries and the practices of SLPs (e.g. Mexico) may provide an aid in the assessment and treatment of bilingual children in need of services in the US.

Speech-Language Pathology in Mexico

Speech-language pathology is a new and growing field in Mexico. It began with the construction of hospitals providing "specialty services" in 1851 by order of President Benito Juarez (COTEOC, 2006). These services included physical therapy, occupational therapy, and speech therapy as a single entity. It was not until 1951, when Dr. Berruecos Tellez founded the "Instituto de Audición y Audiología" in Mexico (IMAL, 2006), that speech-language pathology and audiology were differentiated from the other "specialty services."

Similar to the US, there are several different areas (e.g., speech-sound disorders) of speech-language pathology in Mexico. At the Instituto Mexicano de Audición y Lenguaje (Mexican Institute of Audiology and Language, IMAL) a bachelor's degree is offered that involves a 4-year degree plus 1-year of service. The bachelor's title is that of a license in audiology, voice, and written and oral language treatment (IMAL, 2006) which allows graduates to evaluate, create treatment plans, and treat individuals of any age involved in any aspects of language, voice, and audiology. IMAL also offers a separate master's degree in language/audiology pathology for individuals who already have degrees in one of the following areas: psychology; audiology, voice, written and

oral language treatment, medicine, and special education. The 4-semester master's degree is offered to those who are interested in teaching or doing research in the field (IMAL, 2006). Other titles include "pathology of language" and "human communications" programs. These programs train speech-language professionals to serve children and/or adults in Mexico (IMAL, 2006).

       With the increasing need for improvements to the identification, assessment, and treatment of Spanish-speaking Mexican-American children (majority of Spanish-speaking children in the US), US practitioners may benefit from information regarding the practices of SLPs in Mexico. Information regarding child identification, published/unpublished Spanish assessments normed in Mexico, therapy practices, family involvement, cultural information, and education would be helpful. Despite the fact that the speech-language profession in Mexico has been a formal discipline for 50 years, a paucity of information is readily available describing practices, procedures, assessment tools, and publications in Mexico. Practices on assessment and treatment of children with speech and language disorders in Mexico may identify clinical practices that can be implemented with Spanish-speaking children in the US. Therefore, the purpose of this investigation was to conduct an ethnographic investigation into the clinical practices utilized by Mexican speech-language pathologists (or the equivalent) to evaluate and diagnose children suspected of having a speech and/or language disorder. Based on search engines that were used (i.e., through Google and the university library: ERIC, AcademicOneFile, CINAHL, Embase) no information was found regarding assessment and treatment practices of children with suspected speech or language disorders in Mexico. The purpose of this study was to answer the following research questions:

1. What is the educational training received by SLPs in Mexico?

2. What are the clinical practices used by SLP's in Mexico to identify, assess, and treat children suspected of having a speech or language disorder?

Chapter II

Methodology

This qualitative research study employed ethnographic interviews to explore educational training and clinical practices of identification, assessment and treatment associated with speech-language pathology (or its equivalent) in Mexico. The study identified three themes related to the clinical management of children with speech-language impairments: identification, assessment and treatment practices. Additionally, themes introduced by the interviewees were identified and incorporated into the thematic analysis.

Participants

The first step in the process was to gather names and contact information for individuals who met the requirements previously discussed. Participants were recruited utilizing contacts known to the supervising professors. Contacts who met the criteria were asked to participate. Additionally, all contacts were asked to identify additional individuals who met the criteria to participate in the study. A total of eight potential participants were made. An enquiry email or phone call was made to potential participants, introducing the interviewer, stating the purpose of the study, and an invitation to participate in the study (see Appendix A). Three individuals accepted the invitation by emailing back or verbally stating that she was willing to participate. They were asked to email back the consent forms with their digital signature.

Three individuals residing in Mexico who work as SLPs (or its equivalent) participated. All participants had at least two-years full-time experience in working with children with speech and/or language disorders. Interviewees were all female native

Spanish speakers, working in private practices, who had been trained in Mexico as SLPs. Participant 1 was a direct contact provided by one of the thesis advisors. She is a practicing bilingual (Spanish and German) speech and language therapist working in private practice. She resides in Mexico City, Mexico and has been practicing for 26 years. Contact information for participants 2 and 3 was obtained from a professor of Speech-Language Pathology working in Mexico who is known to one of the supervising professors. Participant 2 resided in San Luis Potosi, Mexico and has been practicing as a speech and language therapist for over 20 years. She is currently in private practice. Participant 3 resided in Distrito Federal, Mexico and is a practicing speech and language therapist in private practice. She has been a practicing therapist for 8 years.

Data Collection

The ethnographic interview was scheduled according to the participant's availability. The formal interview took place over the phone using Skype (personal computer-to-phone line format; therefore, the participant was not required to have access to a Skype account.) The interviewer was the only individual who had to have a Skype account to call the participant. The interviews lasted between 20 to 50 minutes. The interviewer thanked the participant for accepting the invitation, restated the purpose of the study, and answered any questions the participant had before beginning the interview. The interviewer had a checklist of pre-identified themes. As the participant introduced a specific theme, the interviewer marked the item off on the checklist. If a theme was not introduced by the participant, the interviewer introduced it when appropriate. The first question addressed general information about school and education:

- Hábleme sobre sus estudios universitarios. (Tell me about your educational background).

The interview continued until all themes were addressed. The following themes were addressed:

- ¿Cómo identifican a niños con posibilidades de problemas del habla y/o del lenguaje? (How do you identify children with possible speech and/or language disorders?)

- Platíqueme sobre el proceso que usa para diagnosticar a niños con problemas del habla o lenguaje. (Tell me about your diagnostic process for children with speech and/or language impairments).

- ¿Cuál es el proceso de diagnóstico y terapia una vez que un niño ha sido identificado con trastorno del habla y/o del lenguaje? (What is the assessment and treatment process you follow once a child has been identified with a speech and/or language disorder).

The interview concluded with a final question to solicit additional information: "¿Hay alguna otra cosa que quisiera añadir? (Is there anything else you would like to add?)." Following this response, the interviewer concluded the interview by thanking the participant.

Additionally, the interviewer used the following strategies to encourage participants' communication without predefining the direction of the interview (Westby, 1990):

- Asking open-ended questions
- Restating what the interviewee says by repeating exact words

- Summarizing the interviewee's statements and allowing them to correct if information was misinterpreted

- Avoiding multiple questions

- Avoiding leading questions that could orient the interviewee to a particular response

- Avoiding using 'why' questions

Audio recordings of the interviews were collected using an external digital recorder, a Marantz solid state recorder, model PMD620. The audio recording captured both the interviewer and the interviewee during the interaction. Participants were aware that they were being recorded.

Prior to the interviewing process, the interviewer received training in ethnographic interview and active listening strategies. A practice interview was conducted with a Spanish-speaking SLP supervisor at the university clinic through Skype using the same methodologies established for the actual interviews. One of the thesis advisors was present during the practice interview. The advisor provided written and verbal prompting as appropriate for the interviewer to use effective strategies. The advisor also modeled effective interview strategies during an interaction with the practice interviewee (e.g., bilingual supervisor).

Transcription and Coding

The audio recordings obtained from the interview were orthographically transcribed. Each orthographically transcribed interview was entered into *Systematic Analysis of Language Transcription* (SALT) (Miller & Chapman, 2004). The interview was segmented into t-units, and SALT conventions were used for mazes. The

interviewees' utterances were then coded for organization of themes. The following codes were used for the pre-selected themes: identification [ID], assessment [AS], treatment [TX]. Themes introduced by the participants were labeled [OT] followed by a number according to the order in which they first appeared in the transcript.

Reliability

In order to ensure inter-judge reliability for the transcriptions, 10% of each participant's audio recording was randomly selected and transcribed by a bilingual (Spanish-English) second transcriber. Numbers that equal to the total minutes of the transcription length were drawn from a hat. The number drawn represented the starting minute on the interview to begin transcribing. Finally, 10% from each minute count was calculated to reach a stopping point. Inter-judge reliability was calculated to be 85% for the first interview, 80% for the second interview, and 81% for the third interview, for an average of 82%. Inconsistencies were found to be due to dialectal differences and the quality of the recording. To insure intra-judge reliability for transcription, 100% of the transcriptions were re-transcribed. Reliability was calculated at the partial-word and additional word level. Reliability was calculated to be the following: 86% for the first interview, 83% for the second interview, and 81% for the third interview, for an average of 83.3%. Discrepancies were resolved by emailing the participants for clarifications and were only sought out to clarify content words (e.g. names of tests discussed by participants.)

A second bilingual (Spanish-English) transcriber coded 10% of each transcription for inter-rater reliability. Each individual coded the transcriptions separately. The two coders then reviewed their results along with the assistance of one of the thesis advisors

for the first and longest transcription. Each utterance was discussed and reviewed for meaning. When there was a mismatch of codes between the individuals, the meaning was discussed and the individuals reached agreement on the best coding label for the utterance. The additional transcriptions were discussed for coding reliability between the transcribers.

Data Analyses

Data analyses followed a modified version of Attride-Stirling's (2001, p.391) six-stage procedure, beginning with the organization of themes. The modified version involved a four-stage procedure due to the predetermined theme selection. Repeated readings of the transcriptions were performed to locate salient themes or topics. Statements made by the participants were used to identify the salient themes. It was anticipated that the themes would involve the previously chosen topics, as well as themes of importance to the interviewees. The themes or topics were used to begin the creation of networks. Networks represented the general theme that would represent additional subcategories within the themes.

The second stage involved the description and exploration of the networks generated. A separate document was created for each theme that listed utterances related to the theme. Meaning and significance were explored for each utterance to arrive at subcategories for the networks created. The third stage involved the identification of principal issues discussed by at least two participants. In other words, using the coded utterances and the networks created, comparisons were made across all three participants. Finally, stage four involved identifying the most significant themes to address the research questions (see Figures 1-3). This was accomplished by comparing individual

networks as well as utterances from each theme and identifying salient topics discussed by all three participants. Networks were created to represent what was discussed by all three participants.
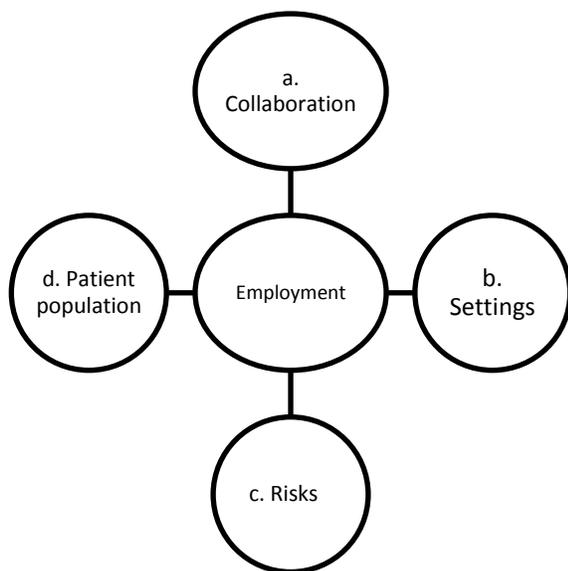
Figure 1. Example of Participant 1 Network: Employment.
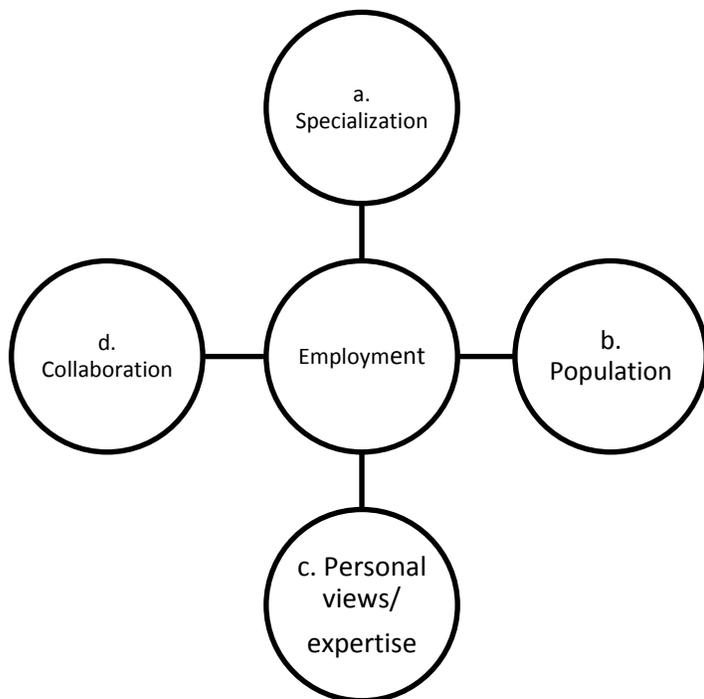
Figure 2. Example of Participant 2 Network: Employment.
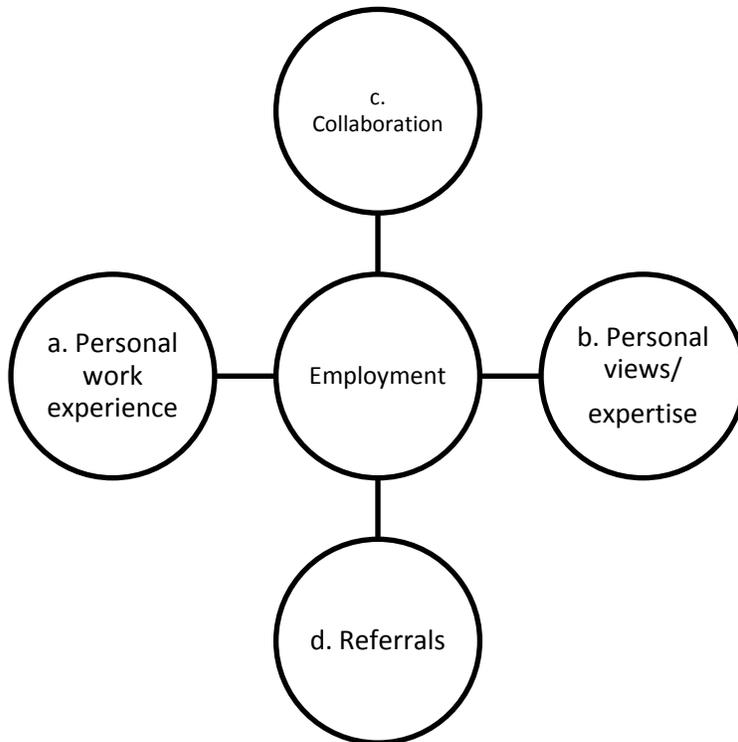
Figure 3. Example of Participant 3 Network: Employment.

The results from stage three and four were emailed to each participant. Results were sent in an Excel spreadsheet containing the utterances from the transcription coded into their different topics, as well as a Word document containing the networks produced. The participants were asked to review the themes, networks, and quotes obtained from the transcriptions. The participants replied by stating that they were in accordance with what was described for the purpose of this study.

Chapter III

Results

Thematic Analysis

Six thematic networks emerged from the analysis of the transcribed interviews. Global themes, representing topics discussed by all three interviewees, were as follows: educational training, employment, professional issues, identification, assessment, and treatment. The themes and their networks are presented in Figures 1 thru 6. Additionally, quotes from the participants are provided as evidence for the relevance of the thematic networks.

Thematic Network 1 Global Theme: Educational Training

The global theme for the Educational Training network is made up of three organizing themes: educational experience, history of speech-language pathology training in Mexico, and post-graduate education (see Figure 4). This global theme represents an exploration of core education experiences, as well as efforts to obtain additional academic and clinical training. Additionally, all therapists contrasted their personal experiences with present and past national standards in speech-language pathology training.

```
                    Educational
                    Experience


                    Educational
                     Training

       Progression/              Post-grad
        history of               education
        SLP degree
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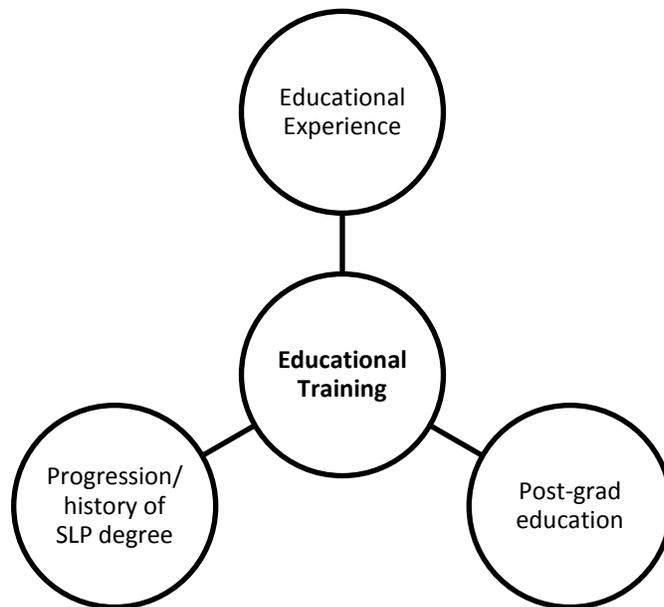
Figure 4. Thematic Network: Educational Training.

Educational training in speech-language pathology was described by all

participants to be a four- to five-year degree (though it could be completed more quickly

if summer school was pursued). Unlike medicine which requires specialized training, it is

a terminal degree that allows an individual to practice immediately after graduation.

Training is general, covering multiple aspects of communication, including language,

speech, hearing, learning, swallowing, and alternative/augmentative communication.

In order to graduate, participants reported that all students in Mexico are required

to complete a "social service" year, regardless of the degree. Interviewees were required

to complete 360 hours at an assigned placement, which can be completed between six

months to a year. Once all requirements are completed, students obtain professional

licensure to practice. Participant 1 was placed in a general hospital in Mexico,

specifically in plastic surgery for cleft lip and palate. She commented that she was able to

be present during surgeries and attend courses offered to plastic surgeons. It is unclear if

the assigned service always relates to the degree obtained or if there is any supervision,

so it may or may not be comparable to a Clinical Fellowship.

> *Me gustó tanto, me quedé un año más de voluntaria ahí. Porque también, o sea, no nada más fue enfocado al trabajo de terapia sino que me llevé bien con los médicos y pude entrar en cirugías, entrar a sus clases de genética, de lo que los médicos estaban en proceso de especialización para cirugía plástica, en especial del área de labiopaladar hendido, todo eso lo pude observar directamente y entrar en las cirugías con ellos.[I liked it so much, I stayed another year as a voluntary there. Because also, it was not just focused to therapy work but I got along with the physicians and I was able to go into surgeries, go into their genetics classes; the physicians were in the process of specialization for plastic surgery, especially in the area of cleft lip and palate. I was able to observe all of that directly and go into surgery with them.]*

Additional education was discussed by all three participants. All participants had either completed a master's or doctoral program. Although post-graduate education is not a requirement, all interviewees discussed their personal motivations for continuing education. These personal motivations stem from their desire to focus in specialized fields and areas they felt required further training. Two of the participants completed post-graduate education outside of Mexico. Initially, participant 1 attended a German school in Mexico. After completing her degree in Mexico, she desired to continue learning about treating aphasic patients. This led her to go to Germany to complete a Doctoral degree. She mentioned that her courses she had completed in Mexico were accepted as equivalent to comparable German courses.

> *Y ya después me fui a Alemania a hacer un postgrado en niños y jóvenes afásicos que salen del coma; inmediatamente se empezaba a trabajar con ellos en un centro de rehabilitación. [And later I went to Germany to complete post-graduate education in aphasic children and young adults coming out of a coma; you would immediately work with them at a rehabilitation center.]*

Participant 2, on the other hand, talked about an interest in obtaining further education in language development. This led her to obtain a master's degree in sociolinguistics with an emphasis on indigenous languages. She later completed a doctoral degree at Harvard University in education where her research focused on linguistics and reading processes. This experience directed her interest in continuing research and focusing on treating children with language deficits.

> *Y hago esta maestría en lingüística, sociolingüística en la escuela de antropología, que es forma lingüística para aprender lenguas indígenas y cosas de ese tipo pero a nivel maestría ya tienes opciones. [And I complete a master's in linguistic, sociolinguistics at the Anthropology School, which is a linguistic school to learn indigineous languages and things of that nature, but at a master's level you have options.]*

All participants reported their own experiences in the context of the history of the degree and the changes that it has undergone over the years. Interviewees discussed that some of the changes included the training focus and length of degree. Regarding training focus, Participant 2 indicated that during her training, her school's program focused on training for a private practice setting. However, according to Participant 2, recently training has changed to focus on school settings. This shift suggests a higher need for school-based SLPs.

> *Bueno, que era una licenciatura que te entrenaba básicamente para trabajar en gabinete, no en escuela. [It was a degree that would train you basically to work in private practice, not in schools.]*

> *Ahora, pues ya te contaré pero ahora la mayoría de los programas se enfocan mas a ser para profesional en escuela. [Now, I will tell you that the majority of programs focus on making you a professional in the schools.]*

In addition to changes in program focus, length of degree has changed over the years. This varies depending on the school. Participant 1 discussed that the university she

attended for the degree (Instituto Nacional de la Comunicación Humana), required a 3 year program. However, after she graduated, the program changed to 4 years.

> *Y entonces fueron en aquel año fuimos la última generación de tres años de carrera. [And so in that year, we were the last generation of a three-year degree.]*

Participants 2 and 3 attended the Universidad de las Américas. Although they attended in different years, the program has varied from 4 to 5 years and it is also highly dependent on the student's willingness to attend during the summer.

Interviewees mentioned that speech-language pathology has different program names depending on the school's program. However, all interviewees obtained their degree in Human Communications as described below:

> *Si, nosotros aquí en México la carrera de comunicación humana cubre todos los aspectos. [Yes, here in Mexico the degree in Human Communications covers all aspects.]*

> *Sales cubierta con el aspecto de habla, lenguaje, aprendizaje, audición y un poquito de caminos de comunicación, de sistemas aumentativos y alternativos de comunicación. [You come out with aspects of speech, language, learning, hearing, a little in communications, augmentative systems and alternative communication.]*

Participant 2 indicated that training in Mexico is in many ways similar to that conducted in the US. La Universidad de las Américas, were she trained, has maintained accreditation from the Southern Association of Schools and Colleges.

Thematic Network 2 Global Theme: Employment

The global theme for the Employment network is made up of three organizing themes: personal work experiences, expression of personal views and expertise, and collaboration with other related fields (see figure 5). This theme relates to their

descriptions of their employment experience as related to locations, colleagues, and

profession expertise that developed as a result of their professional experiences.
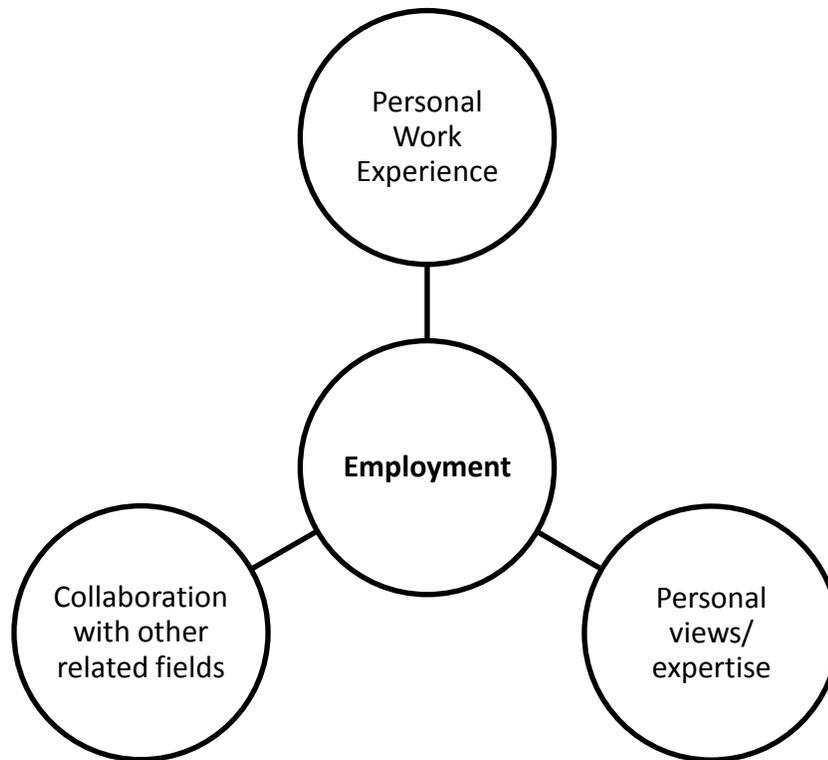
Figure 5. Thematic Network: Employment.

The participants all had worked in a variety of settings but now work as private

practitioners. For all three participants, the previous work settings included the schools.

The participants explained differences in settings, especially between public and private

schools. It was discussed that rural areas may have less support services available to

students or no services at all. On the other hand, private schools and private clinics will

depend on what professionals they have on staff.

> *La escuela pública lo que tiene nuestros servicios de apoyo, se llaman USAER,*
> *Unidades de Servicio de Apoyo a Educación Regular. Y en éstas unidades lo que*
> *hay son profesionales, puede haber un especialista en comunicación, especialista*
> *en aprendizaje, a veces hay un psicólogo y estos grupos van a las escuelas o*
> *tienen su cede en las escuelas y trabajan con los maestros, hacen observación en*
> *aula. [The public schools, those that have support services, called USAER, Units*
> *of Support Services to Regular Education. And these units are made up of,*

professionals, there can be a communication specialist, a learning specialist, sometimes there is a psychologist and these groups go to the schools or are placed in the schools and they work with teachers, make observations in the classrooms.]

Participants had clearly developed areas of sub-specialization during their years of work experience, and in particular offered services in these areas via their private practices. Participant 1 specialized in medical speech pathology while Participant 2 focused on issues related to reading and learning. Participant 3 reported that each of the SLPs in the private practice where she works has an area of specialization and they refer cases that don't fit one of these areas. However, Participant 3 did not identify her area of specialization. Participant 1 modifies her practice depending on the specific needs of the patient and her prior experience with similar patients.

> *Es otra atención que se le da a un niño con síndrome de Down que a un niño con problemas de audición y un problema con, con como se llama de aprendizaje, si?[It's another form of attention that a child with Down syndrome requires than a child with hearing issues or a child with learning difficulties, yes?]*

> *Me he dado cuenta que adultos les gusta mucho trabajar (juegos) en esa forma para que no se sientan demasiado presionados y obviamente hay diferentes grados de juegos. [I have realized that adults like to work in that way (games) so that they don't feel pressured and there are obviously different level of games.]*

Participant 2 discussed that throughout the years, she has learned that because of her focus on reading processes, the best approach is through parent training. She mentioned that although she is familiar with the clinical focus of doing repetitions and/or drills, it is not the methodology she follows.

> *Luego yo desarrollé mi propia metodología de trabajo, yo tengo por medio de juego, trabajo el área cognitiva de lenguaje y de lenguaje te digo todo.[Later I developed my own working methodology, through play, I work the cognitive area of language and by language I mean everything.]*

Interviewees also mentioned the importance of collaboration to their clinical practice. Their interactions with professionals in related fields vary depending on the work setting. For example, collaboration in private practice often includes physicians and psychologists, while the schools could include psychologists and teachers. These professionals are important in the referral process, and often psychologists conduct an assessment and refer to the SLP for treatment (particularly in the schools). Similar to collaboration that SLPs have with other professionals in the US, participants relied on other professional expertise for a holistic approach to each case.

> *Pero si tengo dudas también inmediatamente recurro a los médicos, los psicólogos o vemos por otro lado que es lo que hace falta allí para esclarecer dudas. [But if I have doubts I immediately resort to physicians, psychologists, or we look through other ways to see what it is that we are missing to clarify any doubts.]*

Thematic Network 3 Global Theme: Professional Issues

The global theme for the Professional Issues network is made up of three organizing themes: continuing education, meeting voluntary national standards, and scope of practice (see Figure 6). This global network addresses professional topics closely related to the earlier themes of personal work experience and training.

Figure 6. Thematic Network: Professional Issues.

All interviewees addressed the need for continuing education, and the issues with its accessibility. Participant 1 indicated that there are continuing education opportunities for related professionals that can include SLPs, but it is up to the SLP to make the effort to discover these opportunities. Participant 3 indicated that continuing education is required due to the fact that things constantly change and there is a professional responsibility to stay current. It is unclear if continuing education is required based on some national governing body or it a personal responsibility.

> *Depende mucho de la iniciativa del profesional, de la misma necesidad del profesional que él detecte o ella detecte de sus necesidades de formación y que vaya buscando opciones de formación que él requiere. [It depends a lot on the professional's initiative, from the professional's own formation requirements and looking for the formation options that he requires.]*

Se supone que cuando te dan tu cedula profesional te comprometes a estar actualizado y todo pero realmente no hay nadie que lo rija aquí en México. [It is assumed that when you get your professional licensure you are commit yourself to stay updated and all but there is really no one here in Mexico that governs this.]

Participant 1 described a voluntary national certification process that is governed by a national "Council of Therapists." This national organization is part of the Asociación de Audiología y Foniatría (Audiology and Speech Therapy Association) and is currently one of the largest associations for audiology and speech-language pathology in Mexico. Introduced approximately 12-15 years ago, the certification process requires a theoretical and practical exam, with re-certification every 5 years. Recertification requires taking an exam, a summary of relevant work experience, and providing evidence of continuing education activities. The introduction of the certificate was in response to professionals in related fields who were providing speech-language services without the recommended training. According to Participant 1, the certificate is an optional undertaking motivated by personal professional growth and satisfaction. At this time, only a small percentage of SLPs reportedly have attained national certification.

Entonces para poder presentar esa certificación o recertificación hay que llevar también todo un curriculum, que es lo que ha estado uno haciendo, que tanto se ha estado actualizando, si ha estado yendo a congresos o a cursos, para ver pues lo más novedoso, lo último en el área de lenguaje. [So in order to be able to present this certification or re-certification you have to have a resumé, what it is you have been doing, how much you have been updating yourself, if you have been attending conferences or courses, to see the latest in the language area.]

Scope of practice also was explained by the participants. Comments addressed jobs and duties of a person obtaining a degree in human communications as wells as limitations or areas that are managed by other health related professionals (e.g. physicians, psychologists). From what was discussed by the participants, scope of

practice is very similar to the scope of practice of SLPs in the US. It was also mentioned

by Participant 1 that auditory verbal therapy is something that has recently been added to

their scope of practice. She discussed that it is still something fairly recent and therapists

have to obtain certification in the US. Finally, examples of diagnostic tests that are not

provided by SLPs were described.

> *Todo lo que se requiere para comunicarse el ser humano, eso es lo que vemos no. [Everything that is required for a human being to communicate, that is all that we cover.]*
>
> *Lo que son los exámenes psicológicos yo no los aplico, si? Eh, obviamente tomé cursos para ver como es un examen de figura humana, que es lo que se valora, que se valora con un Wechsler, que se valora con todas esas pruebas. [I do not administer the psychological tests, yes? Um, obviously I have taken courses to see what a human figure test is like, what it is looking at, what the Wechsler demonstrates, what all those tests look at.]*

Thematic Network 4 Global Theme: Identification of children with possible speech and/or language disorders

The Identification global network is made up of three organizing themes related to

the initiation of the referral process: referrals from the schools, referrals from physicians

and/or psychologists, and parent referrals (see Figure 7). This network represents the

process by which SLPs identify children suspected of having a speech and language

delay or impairment disorders.
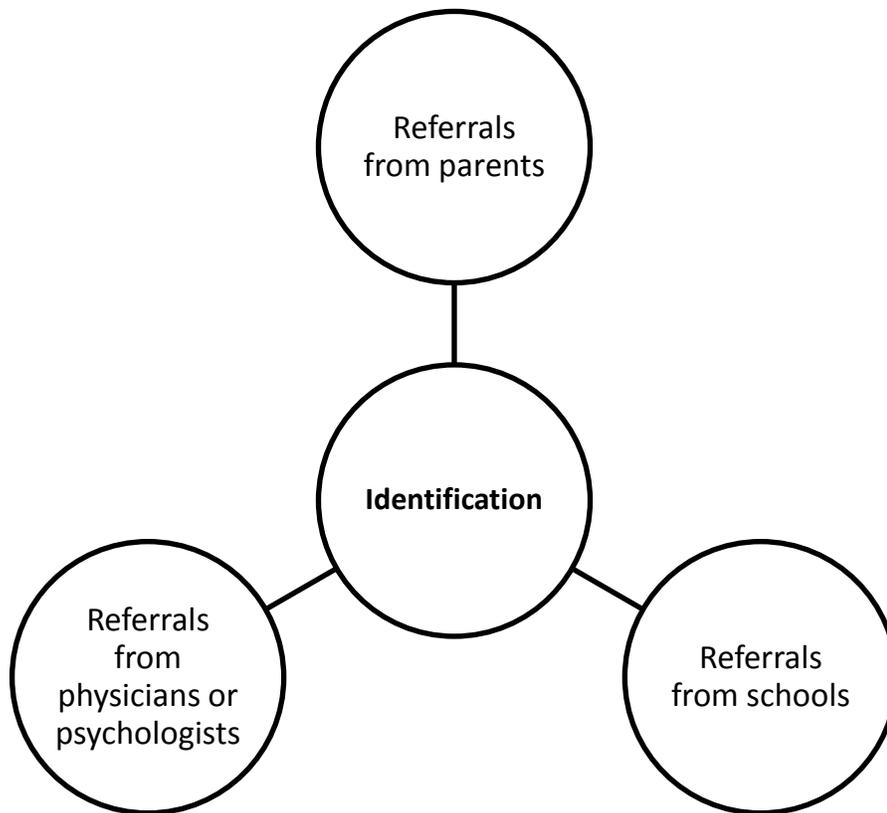
Figure 7. Thematic Network: Identification of children with possible speech and language disorders.

Within the school setting it is generally the classroom teacher who refers a child for a suspected speech and/or language problem. At that point a referral may be made to an SLP in a private practice or to a diagnostic unit within the school known as Unidades de Servicio de Apoyo a Educación Regular (USAER; [Support Service Units to Regular Education]). The role of the USAER is to identify and assess children as needed, and to provide support structures that educators may implement to help the child. According to Participant 2, not all schools have availability to these services, especially those in rural areas. Furthermore, some public schools may share this support unit between several schools. If the school does not have this support unit, the parents may be referred for

private services. However, this depends on the economic abilities of the parents to pay for these special services.

> *Y hay varias instituciones educativas en México, tienen servicios de apoyo de educación especial, algunas de ellas, uno de los trabajos de servicio de apoyo es hacer identificación, es decir hacer observación de aula, de ver que niños podrían requerir de apoyos educacionales y lo hacen mas o menos así. [There are several educational institutions in Mexico that have support services to special education, some of them, one of their service duties is to identify. In other words, they make classroom observations, to see which children would require educational support and that's how they sort of do it.]*

Additionally, Participant 2 discussed that the state (e.g. San Luis Potosí) requires 4- and 5-year-old children to be observed closely for any possible speech and/or language problems. According to Participant 2, the usual age at which a child with a speech-language impairment is identified ranges from 3 to 7 years of age.

In contrast, Participant 3 discussed that referrals to private practices generally come directly from the parents. Parents express concern because their children *"no hablan bien* [do not speak well]" and look for resources to help their child. She mentioned that, in her experience, children she sees in private practice are usually around 3- or 3-and-a-half years of age.

> *La mayor parte de los casos que a mi me llegan es porque los papás dicen que no hablan bien y de ahí empezamos con habla y al hacer una evaluación nos damos cuenta que también tienen problemas de lenguaje. [The majority of the cases I receive is because the parents say they (children) do not speak correctly and we start from there. And after completing an evaluation, we realize that they also have language problems.]*

Finally, SLPs working in medical setting generally see patients referred by physicians or psychologists. Participant 1 described how patients that have experienced some sort of trauma are identified in hospitals before an SLP see the patient. Physicians,

neurologists, and psychologist are usually responsible for diagnosing and identifying these patients. The identification procedure is usually completed at a hospital or a rehabilitation center and these patients are referred to a "terapueta en comunicación humana [human communications therapist]" when the professional judges it necessary.

> *Lo que son también problemas de traumas por algún accidente automovilístico son remitidos por médicos o por psicólogos que han tenido. [Those that have trauma problems because of a car accident are referred by physicians or psychologists that they have had.]*

Thematic Network 5 Global Theme: Assessment of children with possible speech and/or language disorders

The global theme for the Assessment network includes the following organizing themes: assessment process in the schools and the assessment process in private practice (see Figure 8). Interviewees reported working in different private clinics, which had different assessment guidelines, procedures, and materials.
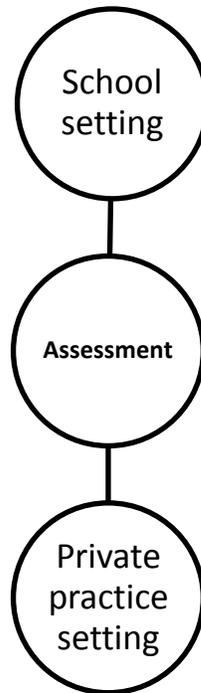
Figure 8. Thematic Network: Assessment of children with possible speech and/or language problems.

The process of assessment in the school varies depending on the availability of service professionals. In one scenario the assessment is conducted by the USAER team, which may include teachers, a learning specialist, a language specialist (i.e., a SLP), a psychologist, and a head coordinator. Participant 2 reported that the most common guidelines for assessment follow an educational and psychological focus. In Mexico, this focus should include the following areas: language, learning, motor, social, intellectual development, and academic abilities according to the child's grade. However, the specific procedures used by the team were not discussed any further by any of the participants.

> *Varía mucho en función de la capacidad misma de la unidad de servicios de apoyo y de la formación de estos maestros. [It varies a lot depending on the capacity of the support service groups and the educational backgrounds of the teachers.]*

The other scenario described was when the support service team is not available
to the school. In addition to the USAER and the SLP, participants indicated that teachers,
and sometimes physicians, are sometimes responsible for performing assessments.
According to Participant 2, because there is a lack of professionals and specialists,
especially in rural areas, teachers may be expected to assess children. These teachers may
or may have not received additional training to conduct an assessment.

> *Las han ido capacitando digamos en esas áreas y entonces pueden ser*
> *maestros regulares que se han ido capacitando, toman cursos pero yo me*
> *he encontrado hasta médicos trabajando en estas unidades de*
> *apoyo.[They (teachers) have been receiving training in those areas and*
> *they can be regular teachers who have been receiving training, they take*
> *courses; but I have found even physicians working in these support service*
> *teams.]*

As previously reported, all interviewees were currently working in private
practice at the time of the interviews. Therefore, most of this discussion focused on
assessments as conducted within a private practice. All participants discussed their
process for conducting an assessment. An interview with the family members and the
patient is always part of this assessment. The use of both standardized and non-
standardized tests is also part of the process.

In addition, Participant 3 collects a speech sample and uses several standardized
measures (see Table 1), such as the *Test de Articulación de Melgar González*
[Articulation Test by Melgar González] (MELGAR; María Melgar de González, 1994),
the *Spanish Test for Assessing Morphologic Production* (STAMP; Nugent, T. M.,
Shipley, K. G., & Provencio, D. O. ,1991) the *Batería de Evaluación de la Lengua*
*Española (*BELE; Rangel, Romero & Gómez, 1988), the *Brigance Assessment of Basic*
Skills, Revised-Spanish Edition, (ABS-R; Brigance, 1984), and the *Test de Vocabulario*

en Imágenes Peabody [Peabody Picture Vocabulary Test] (TVIP; Dunn, Lugo, Padilla, &

Dunn, 1986).

Table 1.

Sample of Standardized Tests reported to be used by SLPs in Mexico

	Country of Origin/Year	Assessment type
Spanish Test of Assessing Morphologic Production (STAMP)	United States/1991	Morphology
Test de articulación de Melgar González (MELGAR)	Mexico/1994	Articulation
Brigance Assessment of Basic Skills-Revised, Spanish Edition (ABS-R)	United States/1984	Identification of student's strengths and weaknesses
Test de Vocabulario en Imágenes Peabody (TVIP-Peabody)	United States/1986	Expressive and receptive semantics
Batería de Evaluación de la Lengua Española (BELE)	Mexico/1988	Linguistic abilities

Both the MELGAR and the BELE are assessments standardized in Mexico. The

MELGAR is an articulation test that can be administered to children 3 to 6 years of age.

It is comprised of 35 stimulus cards representing 56 frequently used words in Spanish.

The BELE is a standardized assessment that evaluates linguistic abilities for children 3 to

11 years of age and it consists of 7 subtests that look into form, use, and content of

language. The ABS-R, developed in the US, is designed for use with bilingual, ESL,

migrant and bilingual special education students in grades K-9 whose first language is

Spanish. The STAMP, developed in the US for Spanish speaking children aged 5 through

11, is a standardized measure which assesses morpheme production by asking the child to

complete sentences related to the action shown in pictures. Finally, the TVIP is a norm reference assessment that looks at a child's receptive vocabulary abilities. This test can be administered to children ranging from 2 ½ to 18 years old. This assessment was developed in the US but was standardized with population from Puerto Rico and Mexico.

Participant 3 reported that an examination of orofacial structure and function is performed when conducting a swallowing assessment. She asks the parents to bring food that the child enjoys. Consistencies include liquids, mechanical soft, solids, and usually something sweet. Participant 3 also mentioned that a complete assessment, depending on the case, may take up to four or five 50-minute sessions. On the other hand, Participant 1 mentioned that depending on the case, her assessment is completed in two 50-minute sessions.

Thematic Network 6 Global Theme: Treatment intervention with children with speech and/or language disorders

The last global network of Treatment includes the following organizing themes: providing treatment services in the school setting and in private practice (see Figure 9). As previously discussed, the majority of the treatment discussion was focused around the participants' current clinical placement. However, all interviewees agreed that their approach is focused on play, regardless of the client's age. Furthermore, Participant 1 and Participant 2 agreed on the fact that training family members is also very important for their therapy approaches. As discussed by Participant 2, the medical focus, rather than a clinical focus, is what is most prevalent in Mexico.
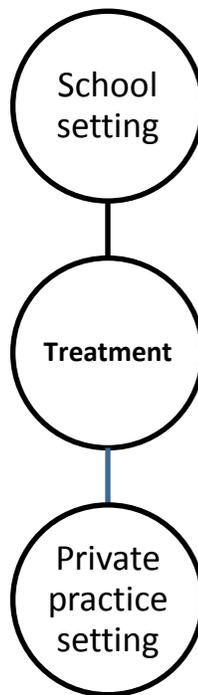
Figure 9. Thematic Network: Therapy intervention with children with speech and/or language disorders.

      In the school setting, therapy may or may not be provided. Participant 2 discussed the support services by the USAER. If the team is available to the school it will be depend on the amount of professionals and the professionals' clinical expertise to develop the treatment goals and the treatment process. Similar to the therapy approach in the US, children may receive therapy services in groups, individually or through careful observation in the classroom. USAER may work in conjunction with the teacher in the classroom to address the child's development in the classroom.

> *No hay un protocolo común y en México tenemos escuelas en las que si tienen protocolo de identificación, si tienen seguimiento y todos los mecanismos para que sean identificados y atendidos. [There is no common protocol and in Mexico we have some schools that do have an identification protocol, they have a follow-up, and all the procedures so that the children can be identified and serviced.]*

Participant 1 discussed her therapy approach with the use of games (for both children and adult). She also mentioned that it is very important for her to have a family member present during the session. Sessions run for approximately 45 minutes and the therapist takes notes during the session. These notes are for family members to be able to follow and implement what was done during the session at home. She also mentioned that sessions vary depending on the client's goals but it is always achieved through play.

> *Es en base a un juego interactivo entre la persona que acompaña al paciente, el paciente mismo y yo, vamos trabajando y entonces vamos sacando esos ejercicios orofaciales, o de soplo, o de respiración o lo que sea necesario. [It is based on interactive play between the family member, the patient and me, we work and we get these exercises, orofacial, blowing, respiration, or whatever it is necessary.]*

Participant 2 discussed her therapy approach to be through parent training. She is heavily involved in written and oral language with her clients, as well as working with children with reading difficulties. However, her parent training is also based on using play to achieve language goals. She implements a program, which she created and published, that involves monthly group meetings with parents for the course of one year. This model is based on providing the parent with enough training to essentially become the child's therapist. She asks the parents to record interactions between the child and the parents and based on the video she provides feedback on things that were done correctly and things that need to change. The program can be focused on either written or oral language. The age group of clients she services range from three to ten years of age and may include children with a disorder associated to their speech and language problems (e.g. Down syndrome, Fragile X, William syndrome).

> *Los padres tienen que leer, tienen que estudiar, trabajamos con modelamiento de cómo hacer las cosas y con videos yo hago análisis de videos, les doy retroalimentación. [The parents have to read, have to*

> *study, we work with modeling to know how to do things and with videos I make an analysis and provide feedback.]*

Participant 3 discussed her therapy approach as being whole language. She described that her technique focuses on providing the client with opportunities to address all goals during the session. Therapy sessions are carried out twice a week for 50 minutes. The interviewee mentioned that play interactions during her sessions allow her to address all goals, including semantics, pragmatics, syntax, articulation, feeding, and cognition.

> *Intento de que sea por medio de juegos y trabajar todo, en la semántica, pragmática y sintaxis, algo de juego y cognición. [I try for it (treatment) to be based on play and work everything, in semantics, pragmatics, syntax, some play and cognition.]*

Chapter IV

Discussion

General Discussion

This study was an exploration of the educational training, identification, assessment, and treatment practices of SLPs in Mexico. Initial searches for information included the university's library databases and the Google Scholar website. However, additional data were collected after the interviews were completed. Based on the interviews, information was examined and confirmed with the information that the participants provided. This helped in broadening the search and tried to expand on additional information. Searches included terms such as "fonoaudiología [term used for speech-language therapy in Central and South America], terapia del habla en México [speech therapy in Mexico], and SLPs in Mexico."

During the interviews, the participants provided information from which six distinct thematic networks were derived. The networks included the global themes of educational training, employment, professional issues, identification and assessment of children with possible speech and/or language disorders, and treatment of children with speech and/or language disorder. These networks provided an organizing framework for the themes that emerged from the participant's experiences as speech-language therapists in Mexico.

The first network, *educational training*, provided insight about the progression of the speech-language pathologist degree equivalent in Mexico. Participants provided personal accounts of their educational experience, including course requirements, social service requirements, and years of education. From the information provided, several

commonalities with the SLP degree in the US can be noted. For example, many of the courses are shared by both degrees (e.g., augmentative and alternative communication, dysphagia). The social service discussed can be compared to the internship experience that several universities require from the students in the US. A chief difference between the US and Mexico is the name and length of the degree. In Mexico, according to the participants, speech-language pathology is the equivalent of a degree in Human Communications. After graduating from high school, a student can go straight into speech-language pathology, complete the degree and receive a practicing license. The degree can vary in length from three to six years depending on the student's compromise to attending school during the summer. Furthermore, all participants considered it important to further their education either to fulfill personal satisfaction, because they felt lacking information in certain areas, or for pursuing personal interests.

The second network provided insight into the participants' past *employment* experiences as well as their current ones. All participants discussed the school setting as a possible employment opportunity. It was discussed that the focus of the speech-language pathology degree had changed focus from training for private clinic to school settings. Nevertheless, all participants in the study were working in a private clinic. Another topic discussed was collaboration with other related fields. Participants reported that collaborations were dependent on the setting (e.g., school, private clinic) but generally involved a psychologist, teacher, or physician. This demonstrates the idea that speech-language pathology is not an isolated field; rather, requires a team to provide services to a potential patient or client (which is the case in the US for most settings).

The third global theme, *professional issues*, provided insight into scope of practice and continuing education. Scope of practice of SLPs in Mexico was discussed to be very similar to the scope of practicing SLPs in the US. A human communications therapist can treat in many areas (i.e., dysphagia, language, articulation, voice, fluency, augmentative and alternative communications). In terms of continuing education, therapists have the option of meeting voluntary standards. Similar to an entity like ASHA, those who participate are required to attend courses and be familiar with the most up-to-date information.

The global theme *identification of children with possible speech and/or language disorder,* is the forth network presented. From the information provided by the participants, it became apparent that it is not the therapist's role to identify children with a possible disorder. Therapists receive referrals from physicians, psychologists, teachers, and concerned parents. In contrast, SLPs in the US can be involved with the identification process (ASHA, 2007). For example, response-to-intervention procedures are in place for SLPs in most school districts nation-wide. Moreover, US practitioners are encouraged to consult with other professionals.

The fifth global theme referred to the *assessment of children with possible speech and/or language problems.* This network provided broad information about different situational contexts. In the schools, an assessment team (i.e. USAER) may be present to provide a broad arrangement of tests and/or observations of the child. However, suburban or rural areas may not have access to professionals to provide services. On the other hand, in private practice, the participants discussed personal guidelines and assessment

tools used. Commonalities include an interview process, the use of formal (i.e.

standardized) tests, and informal tools (i.e. a speech sample).

The information provided by the participants reveals the use of measures in

Mexico that are standardized in the US. However, no reports of SLPs using standardized

measures from Mexico have been reported or made available. This becomes important,

especially when many of the bilingual children receiving services in the US are of

Mexican descent. Standardized tools standardized in Mexico could be beneficial for

properly diagnosing these children.

An important discussion presented by the participants involved the possibility of

non-SLP professionals providing assessment services. Due to the lack of therapists in

several areas of Mexico, one participant reported that teachers and educators may be

obligated to provide services to which they may or may not have enough education for a

thorough evaluation. A need for more therapists in Mexico was discussed by all

participants. A need of more SLPs in the US is also a reality. However, educators and

teachers are not allowed to provide speech and language services to children. The

Response-to-Intervention model does allow the SLP to provide indirect services to

children who may not need full services but requires additional support in the classroom.

These services are possible by the SLP supplying aid to teachers to make appropriate

modifications for children.

The sixth and last global network referred to *therapy intervention of children with*

speech and/or language problems. This network was also divided into interventions in

the school versus private practice because practices may vary widely. A commonality

presented by all interviews was that a play-based intervention is followed. Another

characteristic important to mention was the importance of family involvement in the intervention.

Based on the participants' interviews, the speech-language profession in the US and Mexico is similar in the following aspects: education, work settings, and scope of practice. Areas found to be dissimilar included the use of different assessment tools, and therapy intervention involving a closer relationship with parents and family. It was mentioned by the participants that voluntary continuing education for SLPs in Mexico. Interestingly, this is also true for SLPs in the US. Only licensed SLPs are required to continue their education by completing credit hours yearly to renew their license.

Limitations and Future Research

This study is characterized by several limitations. One of the limitations of this study was the fact that only three participants were interviewed. Results may have been improved with additional participants. Moreover, only one interview per participant was collected. Although a follow-up email was conducted to clarify information provided in the interview, additional data related to the six themes may have been augmented/clarified with at least one additional interview per participant. Another limitation was the fact that all three participants were from private practices. It is possible that additional data would have been gathered from an SLP practicing in another setting (e.g., school). A third limitation to this study was the interviewer's lack of experience with ethnographic studies and interviewing skills. Attempts to reduce the effects of this limitation were made via a pilot interview and supervisor feedback. Another limitation to this study was the use of phone interviews. A face-to-face interview is preferred in order to cue into the non-verbal communication; which provides rich

information to the conversation and interviewer. Finally, a last limitation was the participants' level of experience. Two of the participants in the study received doctoral degrees; therefore, they may not be fully representative of SLPs in Mexico. As a result, one must consider how much of the participants' knowledge influenced their practices and decisions related to identification, assessment, and treatment.

Future research can focus on gathering more information about more SLPs in Mexico, practicing in different settings and in diverse parts of Mexico. The information collected may provide for a larger comparison and contrasting of assessment and treatment practices in Mexico. In addition, this could potentially provide more information about commonly used standardized assessments and resources that practicing SLPs in the US can use with bilingual children. Information gathered can be expanded to other Spanish-speaking countries to bring assessment and treatment ideas together that will better service bilingual children from various Spanish-speaking countries.

Clinical Implications and Summary

The purpose of this study was to provide information about assessment and treatment practices of speech-language pathologists in Mexico. Information gathered from the interviewees may allow SLPs in the US to better service bilingual children. Tests used and standardized in Mexico may be a good resource to use for monolingual and bilingual children especially those children who are of Mexican descent. Generalization to what SLPs are doing for assessment and treatment of children in Mexico cannot be made. However, this study becomes an initial attempt to gather information about possible collaboration of SLPs in Mexico and the US.

Results from this study also reveal the high importance that Mexican SLPs place on working closely with the child's parents. Several authors in the US also have previously discussed the involvement of the parents during treatment (Roseberry-McKibbin, 1994). Taking into account cultural variables, it is possible that SLPs treating bilingual children may more closely involve the parents.

A general conclusion based on the results of this study reveals that SLPs are using standardized measures from the US. Based on the responses by the three interviewees, the responses do not reveal use of tests from other Spanish countries. There is potential value in making this a two-way communication: Mexican SLP's have extensive training and have already applied practices common in US to Mexican children and their families. It may benefit American SLP's to learn about these modifications (e.g. what does parent training look like in Mexico, what about "whole language"). They are using tests specifically designed for Mexican Spanish speakers, how can we adapt and adopt them? How can we evaluate their reliability, validity, sensitivity, specificity?

The goal becomes to reduce the over- and under-identification of children requiring speech and/or language services and to maximize the use of assessment tools and treatment practices to better services and treatment outcomes. It would be ideal for SLPs from different countries to have a means to communicate and discuss assessment/treatment practices. To be aware of all available assessment instruments would improve speech-language services for children who are bilingual English-Spanish speakers or monolingual Spanish speakers living in the US.

References

American Speech-Language-Hearing Association. (2005). Standards and Implementation

    Procedures for the Certificate of Clinical Competence in Speech-Language

    Pathology. Retrieved April 9, 2011, from

    http://www.asha.org/certification/slp_standards.htm#Std_VII.

American Speech-Language-Hearing Association. (2007). *Scope of Practice in*

    Speech-Language Pathology [Scope of Practice]. Retrieved April 9, 2011 from

    http://www.asha.org/policy.

American Speech-Hearing Association (2009). *Speech Sound Disorders: Articulation*

    and Phonological Disorders. Retrieved June 30, 2010 from

    http://www.asha.org/public/speech/disorders/SpeechSoundDisorders.htm#what_a

    re_dis

American Speech-Hearing Association. (2011). *About the American Speech-Language-*

    Hearing Association (ASHA). Retrieved April 27, 2011 from

    http://www.asha.org/about/

Anderson, R. T. (2004). First Language Loss in Spanish-Speaking Children: Patterns of

    Loss and Implications for Clinical Practice. In B. Goldstein (Ed.), *Bilingual*

    language development and disorders in Spanish-English speakers (pp. 187-211).

    Baltimore: Brookes.

Attride-Stirling, J. (2001). Thematic networks: An analytic tool for qualitative research.

    Qualitative Research, 1, 385-405.

Bedore, Lisa M., & Peña, Elizabeth D. (2008). Assessment of Bilingual Children for

    Identification of Language Impairment: Current Findings and Implications for

Practice. *The International Journal of Bilingual Education and Bilingualism, 1(*11), 1-29.

Bernstein, R. (2004). *Hispanic and Asian American increasing faster than overall population.* Retrieved November 29, 2010 from http://www.imdiversity.com/villages/asian/reference/census_his-asian_estimates_0604.asp

Brigance, A. H. (1984). *Brigance Diagnostic Assessment of Basic Skills, Spanish Edition*. North Billerica, MA: Curriculum Associates.

Bureau of Labor Statistics. (2010). *U.S. Department of Labor, Occupational Handbook, 2010-2011 Edition, Speech-Language Pathologists*. Retrieved April 9, 2011 from http://www.bls.gov/oco/ocos099.htm

CensusScope. (2000). *United States: Language*. Retrieved on November 3, 2010 http://www.censusscope.org/us/chart_language.html

Cervera, J. F., & Ygual, A. (2002). Intervención educativa en los niños tartamudos: retos técnicos y compromiso ético para los especialistas en audición y lenguaje [Educational intervention in stuttering children: technical obstacles and ethical compromise for the audiology and langauge specialists]. Retrieved March 30, 2011 from http://www.ttm-espana.com/archivo/tartamudez_infantil.pdf

Colegio de Terapeutas Ocupacionales-COTEOC. (2006). Historia de la terapia ocupacional en México [History of Occupational Therapy in Mexico]. Retrieved on October 19, 2010 from http://www.coteoc.org/1336/1294.html

Corbin, J., & Strauss, A. (1990). *Basics of qualitative research: grounded theory procedures and techniques.* London: Sage Publishing.

Dunn, L. M., Padilla, E. R., Lugo, D. E., & Dunn, L. M. (1986). *Test de Vocabulario en Imágenes Peabody: TVIP: Adaptación Hispanoamericana* (Peabody Picture Vocabulary Test: PPVT: Hispanic-American Adaptation). Circle Pines, MN: American Guidance Service (AGS), Inc.

Goldbart, J., & Marshall, J. (2004). "Pushes and Pulls" on the Parents of Children who use ACC. *Augmentative and Alternative Communication*, *20(4)*, 194-208.

Guiberson, M. M., Barrett, K. C., Jancosek, E. G., & Itano, C. Y. (2006). Language Maintenance and Loss in Preschool-Age Children of Mexican Immigrants: Longitudinal Study. *Communication Disorders Quaterly, 28, vol. 1,* 4-17.

Gildersleeve-Neumman, C., Kester, E., Davis, E., & Pena, E. (2008). English speech sound development in preschool-age children from bilingual English-Spanish environments. *Language, Speech, and Hearing Services in Schools, 39*, 314-328.

Goldstein, B. A., & Iglesias, A. (2006). *Contextual probes of articulation competence-Spanish.* Greenville, SC: Super Duper Publications.

Hamayan, E., & Damico, J. (1991). *Limited bias in the assessment of bilingual students.* Austin, TX: Pro-Ed.

Hodson, B. W. (2007). *Evaluating and enhancing children's phonological systems.* Greenville, SC: Thinking publications - University.

Hodson, B. W. & Prezas, R. F. (2010). *Hodson-Prezas Assessment of Phonological Patterns in Spanish.* Unpublished assessment tool, Wichita State University, Wichita, KS.

Instituto Mexicano de Audición y Lenguaje. (2006). Dirección de Enseñanza. Retrieved on November 3, 2010, http://www.imal.org.mx/main.html

Instituto of Audición y Audiología, A.C. (2006). Pedro Berruecos Tellez. Retrieved

 October 13, 2010 from http://www.imal.org.mx/main.html.

Kayser, H. (1989). Speech and language assessment of Spanish-English speaking

 children. *Language, Speech, and Hearing Services in Schools, 20,* 226-244.

Kritikos, E. P. (2003). Speech-language pathologists' beliefs about language assessment

 of bilingual/bicultural individuals. *American Journal of Speech-Language*

 Pathology, 12, 73-91.

Langdon, H.W. (1992). *Hispanic children and adults with communication disorders:*

 Assessment and intervention. Rockville, MD: Aspen Publishers, Inc.

Leung, B. (1993). *Assessment considerations with culturally and linguistically diverse*

 students. Presentation at National Association for Multicultural Education, Los

 Angeles, CA.

Lidz, C. S., & Peña, E. D. (1996) Dynamic assessment: The model, its relevance as a

 nonbiased approach, and its application to Latino American preschool children.

 Language, Speech, and Hearing Services in Schools, 27, 367-372.

Martínez, L., Cabezas, C., Labra, M., Hernández, R., Martínez, L. M., Cerutti, M., &

 Malebrán, C. (2006). La logopedia en Iberoamérica [Logopedia in Ibero-

 America]. *Actas del XXV Congreso de Logopedia, Foniatría y Audiología*.

 Granada, España.

Mattes, L. J. (1987). *Spanish articulation measures.* Oceanside, CA: Academic

 Communication Associates.

Mattes, L., Omark, D. (1991). *Speech and language assessment for the bilingual*

 handicapped (2nd ed.). Oceanside, CA: Academic Communication Associates.

Melgar, de G. M. (1994). *Cómo detectar al niño con problemas del habla.* México:

Trillas.

Miller, J.F., & Iglesias, A. (2008). Systematic analysis of language transcripts (SALT),

Bilingual SE Version 2008 [Computer software]. SALT Software, LLC.

Montfort, I. (2009). Comunicación y Lenguaje: Bidireccionalidad en la intervención en

niños con trastornos de espectro autista [Communication and Language:

Bidirectionality in the intervention on children with disorders in the autism

spectrum]. Retrieved on March 30, 2011 from

http://www.neurologia.com/pdf/Web/48S02/bbS02S053.pdf

Nugent, T. M., Shipley, K. G., & Provencio, D. O. (1991) *Spanish Test for Assessing*

Morphologic Production (STAMP). Oceanside, CA: Academic Communication

Associates.

Pena, E. D., & Iglesias, A. (1993). Paper presented at the Annual Convention of the

American Speech-Language-Hearing Association: *A Dynamic assessment: The*

model and its application to language assessment. Anaheim, CA.

Plante, E., & Beeson, P. (1999). Introductions to the professions of audiology and

speech-language pathology. In *Communication & communication disorders: A*

clinical introduction (pp. 1-16). Boston: Allyn & Bacon.

Prezas, R. F. (2007).Determining optimal Spanish words for inclusion in assessments that

evaluate children's phonological patterns. Oral presentation and published

proceedings at the annual Graduate Research and Scholarly Projects Symposium,

Wichita, KS.

Ramírez, R. R., & de la Cruz, G. P. (2003). The Hispanic Population in the United States: March 2002. Retrieved December 11, 2010 from http://www.census.gov/prod/2003pubs/p20-545.pdf

Rangel, E., Romero, S., & Gómez, M. (1988). Batería de evaluación de la lengua española para niños de 3 a 11 años: Manual de aplicación, calificación e interpretación [Evaluation battery for the Spanish language for kids 3 to 11 years: Application, qualification, and interpretation manual]. Mexico City: Secretaría de Educación Pública, Dirección General de Educación Pública.

Roseberry-McKibbin, C. A. (1994). Assessment and Intervention for Children With Limited English Profiency and Language Disorders. *American Journal of Speech-Language Pathology, 3,* 77-88.

Roseberry-McKibbin, C. A. (1995). *Multicultural students with special needs: Practical strategies for assessment and intervention.* Oceanside, CA: Academic Communication Associates.

Roseberry-McKibbin, C., Brice, A., & O'Hanlon, L. (2005). Serving English language learners in public school settings: A national survey. *Language , Speech, and Hearing Services in Schools, 36*, 48-61.

Semel, E. M., Wiig, E. H., & Secord W**.** (2006). *Clinical Evaluation of Language Fundamentals-Spanish Edition* (CELF-4, Spanish). San Antonio, TX: Psychological Corporation.

Skahan, Sarah M., Watson, Maggie, & Lof, Gregory L. (2007). Speech-Language Pathologists' Assessment Practices for Children with Suspected Speech Sound Disorders: Results of a National Survey. *American Journal of Speech-Language*

Pathology, 16, 246-259.

U.S. Bureau of the Census. (2000). *Statistical abstract of the United States, 2000 (*120^th

ed.). Washington, DC: U.S. Department of Commerce.

United States Census Bureau. (2010). Hispanics in the United States. Retrieved June 30,

2010, from

http://www.census.gov/population/www/socdemo/hispanic/files/Internet_Hispani

c_in_US_2006.pdf

Wilson, W., Wilson, J., Coleman, T. (2000). Culturally appropriate assessment: Issues

and strategies. In T. Coleman (Ed.), *Clinical management of communication*

disorders in culturally diverse children (pp. 101-128). Boston: Allyn & Bacon.

Westby, C. E. (1990). Ethnographic interviewing: Asking the right questions to the right

people in the right ways. *Journal of Childhood Communication Disorders, 13*(1),

101-111.

Yavas, M., & Goldstein, B. (1998). Phonological assessment and treatment of bilingual

speakers. *American Journal of Speech-Language Pathology, 7(2)*, 49-60.

Zimmerman, I.L., Steiner, V.G., Pond, R.E. (2002). *Preschool Language Scale- Fourth*

Edition (PLS-4-Spanish). San Antonio, TX: Psychological Corporation.

Zimmerman, J.P., Satterfield, R., Miller, J., Bilder, D., Hossain, S., McMahon, W.

(2007). Communication Disorders: Prevalence and Comorbid Intellectual

Disability, Autism, and Emotional/Behavioral Disorders. *American Journal of*

Speech-Language Pathology, 16, 359-367.

Appendix A

Sample script for phone or email initial contact

Buenas tardes.
Habla Montserrat Vallejo.
Soy estudiante en los Estados Unidos de patología del habla y del lenguaje y la Sra.
_____me dió su información de contacto.
Quería ver si tiene unos minutos para hablar con usted.
Estoy en el proceso de escribir una tesis y estoy en busca de posibles participantes.
Mi tesis tiene un énfasis en las prácticas de los patólogos del habla y del lenguaje (o su equivalente, por ejemplo, terapeuta del habla) en México.
Específicamente, estoy buscando obtener información sobre su trabajo con niños con problemas del habla y/o lenguaje. Su participación se obtendría por medio de una entrevista por teléfono y a ningún costo para usted. Además, la fecha y hora de la entrevista se dejarán a su disposición.
De verdad le agradecería muchísimo si aceptara la invitación.
Si accede, solo necesito su correo electrónico en donde le enviaré un poco más de información y le mandaré un formulario de consentimiento también.

Por el contrario, le agradezco su tiempo y quisiera preguntarle si no sabe de alguna persona a la que pudiera contactar que quizá pudiera acceder a ser parte de esta investigación.

¡Muchísimas gracias!

ABSTRACT

THE ASSESSMENT AND TREATMENT PRACTICES OF SPEECH-LANGUAGE
PATHOLOGISTS IN MEXICO

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The purpose of this study was to examine the clinical assessment and treatment

practices of speech-language pathologists (SLPs) in Mexico to identify and assess

children with possible speech and/or language impairments. Three female Spanish-

speaking SLPs educated and working in private practice in Mexico were interviewed by

phone. Interviews were recorded, transcribed, coded following SALT conventions and

analyzed following Attride-Sterling's theme identification and organization of salient

themes. Six salient themes were obtained: educational training, employment, professional

issues, identification, assessment, and treatment. Findings reveal that educational training

is very similar to the training of SLPs in Mexico; work settings may include hospitals,

schools, and private practice; continuing education is voluntary and governed by a

council of SLPs. Identification of children with suspected speech and/or language

disorders may be referred by parents, teachers, physicians and/or psychologists.

Assessment in the schools may be performed by a service team, i.e. USAER, by the SLP

in private practice, or by teachers and/or physicians when no other professionals are

available. Treatment in private practice is based on play-based interactions and SLPs rely heavily on parent or family involvement. Although a limited small sample was used, this study represents an initial representation on SLP practices in Mexico.