Abstract

With the vast diversity in demographics of the U.S. population rising in recent years, the topic of using language interpreters is becoming more prominent within clinical practice in Speech-Language Pathology. The aim of the current study was to compare the use of interpreters between monolingual and bilingual Speech-Language Pathologists (SLPs) working with culturally and linguistically diverse (CLD) clients in the U.S. The study utilized an online survey where participants self-reported their use of interpreters. The respondents consisted of SLPs working in pediatric and/or adult settings. The study included a total of 337 participants including 124 monolingual and 213 bilingual SLPs. Results revealed that there was no statistically significant difference between usage of interpreters by the two groups (monolingual and bilingual SLPs). In addition, both monolingual and bilingual SLPs were equally likely to recommend intervention for a client who spoke a language other than English with borderline skills when compared to a monolingual English-speaking client with similar skills. Future studies can include detailed examination of SLPs' experiences regarding their frequency of interpreter use, training in effective use of interpreters, and collaboration between interpreters, SLPs, and clients. These studies could be helpful to further understand the current assessment and treatment practices for CLD clients.

Keywords: Use of Language Interpreters, Speech-Language Pathologists, Culturally and Linguistically Diverse clients

Introduction

Diversity

Within the U.S., demographics have been drastically changing in the past decades. According to McLeod, Verdon, and Bowen (2013), 19.7% of the individuals living in the U.S. over the age of five speak another language at home besides English. This change is occurring worldwide as we become a more global culture where traditional and geographical boundaries are less influential. For example, specific to Minnesota, a study by Kohnert, Kennedy, Glaze, Kan, and Carney (2003) reported that the Hispanic community alone had grown by 166% in the last decade and Hispanic children accounted for 60% of the students within the state's education system. In 2001, approximately 19% of the students in Minneapolis public schools were classified as Limited English Proficiency (Kohnert et al, 2003). By the year 2050, minority ethnic groups will account for 47% of the population in the U.S. (Harris & Cranston-Gingras, 2005). Speech-Language Pathologists (SLPs) are expected to provide services to these diverse clients, however, 93% of SLPs are Caucasian and only 2% are bilingual (Harris & Cranston-Gingras, 2005; Palfrey, Shotel, Chamot, & Dannels, 2013). This monoculture within the profession could limit SLPs' ability to adequately serve diverse clients. Based on the available literature, the diversity found among clients is not reflected among the SLPs who are serving them. As one of the possible solutions, SLPs can use language interpreters in their clinical practice, and this can alleviate the mismatch between SLPs and their clients who speak languages other than English.

Challenges for SLPs

The diversity of clients can sometimes pose challenges for SLPs. The frequency of challenges with culturally and linguistically diverse (CLD) clients will continue to increase in conjunction with the rise of minority groups. Prior studies have indicated some of the problems faced by SLPs while serving CLD clients. In a study by Harris and Cranston-Gringas (2005), 92-96% of SLPs reported themselves to be 'not competent to somewhat competent' for assessing CLD clients even with assistance from other professionals. In a separate study conducted in Minnesota, 55% of the respondents reported that they had clients on their caseload from at least four different ethnic groups (Kohnert et al., 2003). The number of perceived problems reported by SLPs while serving these clients is very high. One of the most common reported problems is the inability to speak their clients' native language. As stated before, majority of SLPs are Caucasian, monolingual females who are attempting to serve a very ethnically and linguistically diverse population. Consequently, few SLPs express confidence in their knowledge of CLD clients' primary language(s) or developmental norms.

In addition, a limited number of assessment tools currently exist in the U.S. for clients who speak languages other than English. If assessment materials are translated to the appropriate language, the cultural context is usually still not appropriate or applicable to the client (Aguilar, 2013). Frequently, the normative data for the assessment tools consist of monolingual, majority ethnic groups, and as a result, the standardized results do not always reflect the actual abilities of CLD clients. The limitations of the standardized tests could mean that the scores received by CLD clients are not an accurate reflection of their communication skills. As a result, some SLPs do not use standardized tests for CLD clients. Not assessing CLD clients by standardized materials can cause SLPs to be more biased and any data gathered to be incomparable to other

clients. This can cause SLPs to under- or over-refer CLD clients if they base their evaluations on inappropriate standardized assessment tests or simply upon their observations.

Due to relatively diverse coursework and training pertaining to bilingual and minority ethnic group clients in recent years, SLPs have been demonstrating more expertise and confidence regarding serving CLD clients. In a study by Kohnert et al. (2003), a majority of the SLPs agreed with the statement that "special knowledge and skills are needed to diagnose or treat individuals from non-mainstream backgrounds." In a 2005 survey, Roseberry-McKibbin, Brice, and O'Hanlon, found that only 38% of the SLPs reported that they received no coursework regarding bilingual clients, compared to 76% of the participants in 1990. These findings indicate that the profession is striving to provide more education and training to SLPs to improve their proficiency when serving bilingual clients. Roseberry-McKibbin et al. (2005) further observed a strong correlation between the number of perceived problems and the amount of coursework completed by SLPs. Individuals that received a full course related to bilingual issues reported challenges occurring at a lower frequency compared to SLPs who had received only a portion of a course. In addition, SLPs who frequently provided services to bilingual clients believed that their limited training and the lack of appropriate assessment tools reduced their ability to successfully assess and provide intervention to the clients. As a result, solutions are needed that can help reduce the obstacles encountered while providing services to CLD clients. Some of the possible solutions to address these challenges include recruitment of more bilingual SLPs, availability of assessment tools and materials in multiple languages, additional SLP coursework and training that applies to CLD clients and use of language interpreters.

Use of Interpreters

Implementing the usage of language interpreters within clinical practice could help improve SLPs' abilities in achieving optimal outcomes in assessment and intervention for bilingual and multicultural clients. As stated before, SLPs frequently reported their inability to speak their clients' languages as a barrier in therapy. One study examined the use of interpreters by SLPs in pediatric and adult settings who served cities where 10% of the population identified themselves as non-Caucasian and non-African (Kostich & Weiss, 2007). Participants in this study encountered 51 languages once a month and another 38 languages less frequently. The vast number of languages spoken by clients and the frequency of encounters shows the potential role of language interpreters while assessing and treating CLD clients. Language interpreters could also enable SLPs to meet the Individuals with Disabilities Education Act (IDEA), which requires the clients' assessment to be administered in their native language, if feasible (Cooley, Cranfill, Mahanna-Boden, Poffenberger, & Smith, 2012). Furthermore, IDEA mandates that parent participation, language interpretation, and informed consent all be conducted with a language interpreter, if necessary for the family and client (Cheatham, 2011). From prior special education literature, it indicates that a portion of clients and their families are not provided language interpretation services (Cheatham, 2011). In contrast, the topic of using interpreters has only been briefly examined within the speech-language pathology field, even though interpreters are valuable resources. For instance, interpreters permit SLPs to provide bilingual intervention, which has shown to have a positive effect in therapy by encouraging improvements in English and their native language (Pieretti & Roseberry-McKibbin, 2016). About 82% percent of SLPs reported using highly trained interpreters that were knowledgeable of intervention techniques in

their clinical practice (Kostich & Weiss, 2007). This high number reflects how crucial interpreters are while assessing bilingual clients.

While a high number of SLPs utilize interpreters, they pose some additional problems for SLPs. In a study looking at SLPs based in Colorado who used interpreters, only 51% indicated that they are confident in the reliability of their evaluation of bilingual clients (Guiberson & Atkins, 2012). It is possible that SLPs often work with interpreters that have limited or minimal training which can impact the progress made during intervention. As a result, SLPs may not always report higher confidence based on the involvement of interpreters in a CLD assessment (Guiberson & Atkins, 2012). Some of the other common problems reported by SLPs using interpreters include: lack of language competence, fluctuating training procedures for the language interpreters, interpreters' limited comprehension of speech-language disorders, and limited number and accessibility of interpreters (Caesar & Kohler, 2004). A recent study by William and McLeod (2012) showed that 16% percent of SLPs stated that language interpreters were not available to aid in the assessment of multicultural clients and 29% reported interpreters were unavailable for intervention because of limited availability of interpreters.

Although using language interpreters can pose some challenges for SLPs, there are several benefits with a collaborative relationship between SLPs and language interpreters. For instance, interpreters enable SLPs to provide multilingual assessment, which benefits languages spoken by clients and results in overall improvement in therapy outcomes (Thordardottir, 2010). Interpreters also aid SLPs in determining the appropriateness of CLD clients' communication skills since interpreters are more likely to possess information regarding clients' social and cultural communication skills compared to the SLPs (Palfrey et al., 2013). This knowledge is vital in determining if a client has a communication difference or a disorder. In addition, prior

studies have indicated that interpreters often assist SLPs to communicate with CLD clients and their family members more effectively (Cooley et al., 2012). This allows the SLP to accurately discuss the client's assessment and their recommendations with the caregivers. In conclusion, there are multiple advantages of language interpreters. However, limited studies have examined the use of interpreters by SLPs and implications of using interpreters in serving CLD clients.

Aims of the Study

Overall, there are limited studies that have examined language interpreters within the speech-language pathology field. Therefore, the aim of the study was to examine the use of language interpreters by monolingual and bilingual SLPs working in the U.S. The research question is as follows: Are there any group differences for use of language interpreters by monolingual and bilingual SLPs in their clinical practice?

Methods

The study utilized a questionnaire survey targeting SLPs working in pediatric and adult settings. Approval was obtained from the Human Subjects Review Board at Oklahoma State University before data collection began. The survey included a purposeful sampling of SLPs based in the U.S.

Survey Design

The current study included questions from a larger survey study focusing on self-reported efficacy of U.S. based monolingual and bilingual SLPs within pediatric and adult settings (Parveen & Santhanam, 2015). The survey was divided into three sections; background

information, training received, and professional perspectives. All participants anonymously completed the survey by using a Qualtrics link. After the participants completed the survey, the respondents had the option of being entered in a drawing for a \$50 gift certificate. A total of ten \$50 gift cards were distributed to randomly selected participants after completion of data collection. The main questionnaire contained 34 questions including open-ended and close-ended. Three questions pertaining to the use of interpreters from the original survey were included in the current study. The Appendix includes the list of questions from the survey.

Participant Recruitment

Participants were recruited by contacting: (1) different state based Speech-Language-Hearing Association directories; (2) the American-Speech-Language-Hearing Association (ASHA) special interest groups, (3) early intervention centers, hospitals, public schools, and University clinics throughout the nation, (4) through familiar SLPs, and (5) social networking websites including Facebook. Recruitment flyers linking to the online survey were emailed to potential participants. All participants were made aware of the confidentiality of their participation and their right to withdraw from the study at any time. The survey took an estimated 30 to 40 minutes to complete. Data collection occurred in two separate phases. The first phase started in September 2015 and a reminder was posted in February 2016. In order to achieve a higher participation rate, a second phase of the study was conducted in April 2016 with reminder emails posted on different ASHA online communities during July 2016, September 2016, and October 2016. A total of 92 surveys were received at the end of the first phase and 328 participants completed the survey during the second phase. After the surveys were closed, the data were sorted and examined. During data analysis, it was observed that some participants

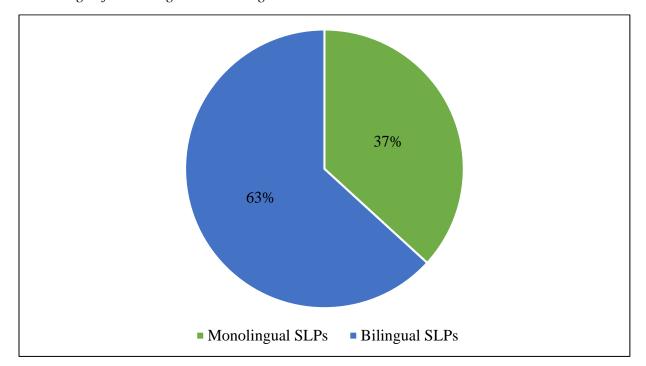
were unable to view all the questions. Due to unavoidable technological issues, a total of 53 surveys were found to be incomplete which were then excluded from further data analysis. Of these 53 incomplete responses, 58.5% of them were bilingual participants.

Participants

The survey had 337 participants including 124 monolingual and 213 bilingual SLPs that had a minimum of 1 year of work experience in the pediatric and/or adult setting throughout the nation. Once data collection was completed, the demographic distribution of the participants was analyzed. Figure 1 represents the total percentage of SLP participants who were either monolingual or bilingual. As noted in the figure, more bilingual SLPs (63%) participated in the survey compared to monolingual SLPs (37%).

Figure 1

Percentage of Monolingual and Bilingual SLPs

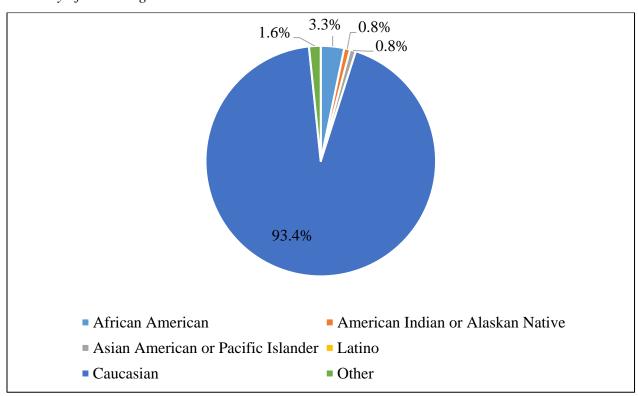


Note. N=337

In addition, the ethnic groups of the SLPs were also examined. Figure 2 represents the specific ethnic groups of the SLP participants. The majority of monolingual SLPs in the study were Caucasians (93.4%). In addition, the survey included primarily female SLPs and only 12 male participants. The diversity of bilingual SLPs was much broader than monolingual SLPs as demonstrated by Figure 3. Similar to monolingual SLPs, a majority of the bilingual SLPs were Caucasians (62.6%) followed by Latinos (19.0%) and Asian Americans or Pacific Islanders (10.4%).

Figure 2

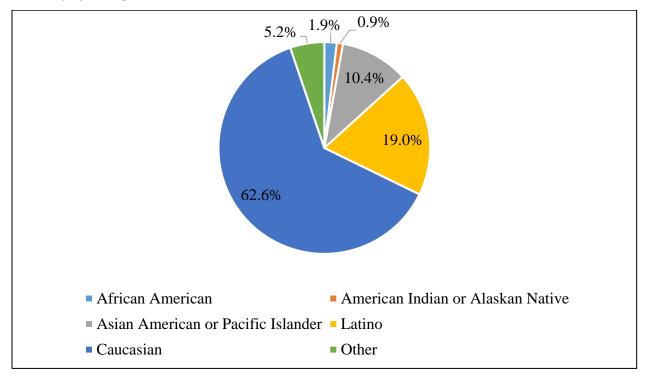
Ethnicity of Monolingual SLPs



Note. N=122

Figure 3

Ethnicity of Bilingual SLPs



Note. N=211

The study also examined the age groups served by SLPs. Figure 4 displays that a majority of the monolingual SLPs worked in pediatric settings (55.6%). Pediatric settings ranged from birth to 18 years old while adult settings range from 19 years of age and older. In addition, Figure 5 illustrates the age groups served by the bilingual SLPs. Similar to the monolingual SLPs, a majority of the bilingual participants (56.3%) reported working with pediatric clients.

Figure 4

Monolingual SLPs-Age Groups Served

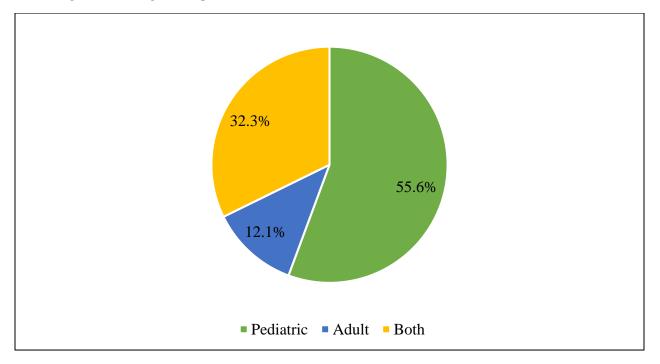


Figure 5

Bilingual SLPs-Age Groups Served

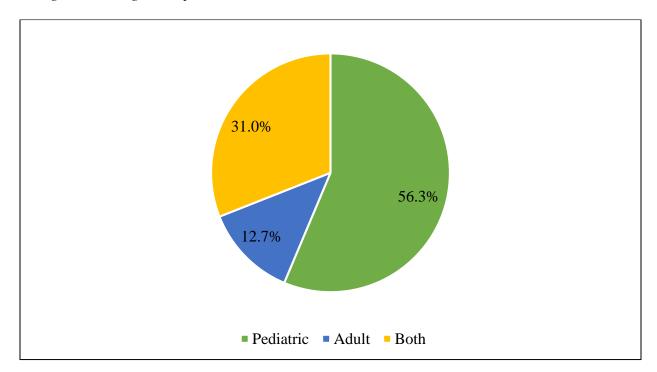
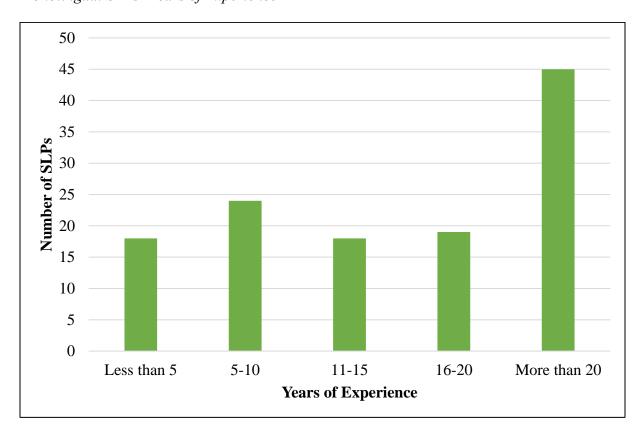


Figure 6 below represents the number of years worked by monolingual SLPs within the profession. A total of 66.1% monolingual SLPs self-reported to have worked in the field for 10 years or longer. The largest group of monolingual SLPs (36.3%) were the individuals that had more than 20 years of experience. The average age of the monolingual SLP participants was 44 years.

Figure 6

Monolingual SLPs' Years of Experience

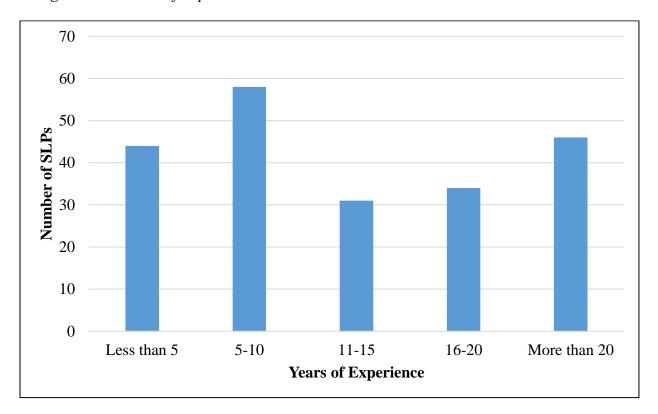


Note. N=124

Figure 7 represents the years of experience of bilingual SLPs. More than half of the bilingual SLPs (52.1%) reported to be in the field for 10 years or longer. The average age of bilingual SLPs was 41 years.

Figure 7

Bilingual SLPs' Years of Experience

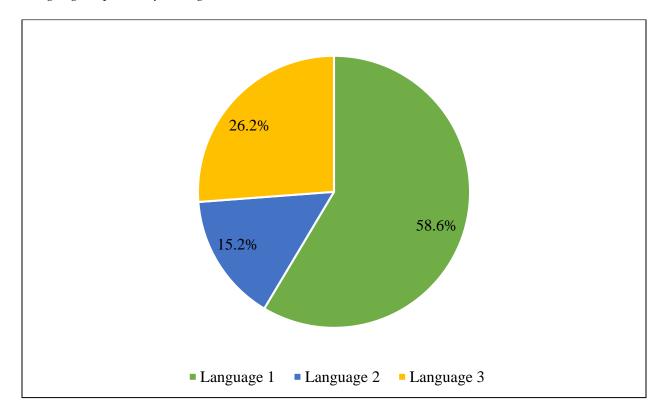


Note. N= 213

Figure 8 below displays the number of languages spoken by the bilingual SLPs and the most frequently spoken language was Spanish (58.6%). In addition, 73.8% of the bilingual SLPs only spoke one secondary language while 26.2% spoke two or more languages in addition to English.

Figure 8

Languages Spoken by Bilingual SLPs



Note. N=210.

Language 1 represents SLPs that only spoke Spanish and English. Language 2 corresponds to participants that knew a language besides Spanish and English. Language 3 represents SLPs that spoke two or more languages in addition to English.

Results

An independent sample t-test was completed to examine whether or not monolingual SLPs used language interpreters more than bilingual SLPs. Results indicated no statistically significant differences between monolingual and bilingual SLPs [t(335)= -0.801, p > 0.05]. Table 1 shows the monolingual and bilingual SLPs' response to their utilization of interpreters.

Table 1

Use of Interpreters by Monolingual and Bilingual SLPs

	Yes	No
Monolingual	86 (72.9%)	32 (27.1%)
Bilingual	141 (66.2%)	72 (33.8%)

Note. N=331; Monolingual SLPs= 118; Bilingual SLPs= 213

Discussion

The aim of the current study was to examine whether or not the usage of language interpreters differed depending on the SLPs' language status – monolingual versus bilingual. The current study indicated some interesting findings which are discussed below.

Usage of Interpreters

The current study indicated that there was no significant group difference between monolingual and bilingual SLPs for use of interpreters in their clinical practice. This finding is encouraging as it reveals that more and more SLPs are beginning to access the services of language interpreters in their clinical practice irrespective of whether they are mono- or bilingual. This finding could also mean that being a bilingual SLP does not mean that they speak the language of the client. For example, a Spanish English bilingual SLP might be working with a French-speaking client. In such situations, bilingual SLPs have the need to use French-language interpreters. Interpreters are valuable resources to all SLPs since interpreters possess a large variety of information that can be applicable for effective assessment and treatment planning of CLD clients. In addition to the use of interpreters by SLPs, the study also examined

the specific graduate coursework experiences reported by the monolingual and bilingual SLPs. Specific to the monolingual group, approximately 25% reported taking a graduate course on use of interpreters. Among the bilingual SLPs, approximately 33% (i.e., 71/213) reported taking a course on use of interpreters. In conclusion, the results from the current study displays the need for more SLPs to receive undergraduate and graduate training related to the utilization of interpreters.

Specific to the overall percentage of SLPs (including monolingual and bilingual), the current study indicated that 68.7% of the participating SLPs used interpreters in their clinical practice. This finding indicates clear progress made in the field in creating awareness among SLPs to use language interpreters as opposed to family members during assessment and treatment of CLD clients. According to the 1996 survey (Guiberson & Atkins, 2012), only 40% of SLP participants reported using language interpreters in their practice. This number increased significantly in Guiberson and Atkins' (2012) study that showed approximately 60% of their SLPs using interpreters. Findings from the current study are slightly higher than Guiberson and Atkins (2012). The differences in the current investigation and the prior studies could be attributed to possible variations in study design, geographical location of the SLP participants, and their primary work settings. Guiberson and Atkins (2012) focused on participants that only worked in Colorado public schools while the current study included participants from both adult and pediatric work settings throughout the U.S. In addition, the study by Guiberson and Atkins (2012) used more of a direct convenience sampling by contacting SLPs registered under the Colorado Department of Education through emails. However, the current study could have received a high percentage of participants from states that have higher CLD populations, resulting in a higher report of usage of interpreters. The difference in interpreter use as reported

by the current study (68.7%) and the prior study by Guiberson and Atkins (2012) suggests that relatively more number of SLPs have begun to access and use language interpreters in the past five years. Although, the minor difference between the two studies in percentage of interpreters used indicates that there still needs to be a focus on encouraging SLPs to use interpreters more and educating SLPs on how to use them effectively. In conclusion, the current study provides evidence for use of interpreters by both monolingual and bilingual SLPs.

Demographic Patterns of SLPs

In addition to usage of interpreters by the SLPs, the current study examined the demographic and linguistic backgrounds of these participants. It was observed that approximately 62.6% of the bilingual SLPs and 93.4% of monolingual SLPs in the study were Caucasian thereby indicating a predominant monocultural group of SLPs. According to a demographic survey published by ASHA (2015), the U.S. population consisted of 27.6% who belong to minority groups. In contrast, only 7.8% of the SLPs were reported to be from minority groups. This suggests a disproportionate ratio between the total population of the U.S. and SLPs who come from minority groups. Based on the available literature, it can be speculated that many SLPs serving the current CLD population may not always have prior experiences across different cultures (Harris & Cranston-Gringas, 2004). The services provided by monolingual SLPs may also be affected by the lack of knowledge pertaining to specific cultures. It is important to note that exposure to cultural experiences is needed as it appears to increase SLPs' confidence and competence when working with CLD clients (Guiberson & Atkins, 2012). This was also discussed by Citron (1995), who found that teachers with both cross-cultural experiences and

language proficiency were more successful compared to those with knowledge of another language but no associated cultural experiences.

Finally, the current study indicated several interesting patterns about the linguistic background of the SLPs. For instance, only a small portion (26.2%) of bilingual SLP participants spoke two or more languages other than English. In addition, 58.6% of these participants only spoke Spanish and English. A high percentage of Spanish-English bilinguals in the study could be attributed to the different regions in the country represented by our participant sample. A majority of SLPs (42.7%) that participated in the study represented California, Illinois, Ohio, Pennsylvania, and Texas. According to the Census Bureau in 2011, out of the total 291.5 million people aged 5 and over, 60.6 million people (21% of this population) spoke a language other than English at home (Ryan, 2013). These demographics are thereby suggestive of a critical need for more bilingual and multilingual SLPs and/or resources such as use of interpreters for effectively addressing the needs of this growing CLD population in the U.S.

Possibility of Recommending Intervention for non-English-speaking Clients

The study also briefly examined the possibility of recommending intervention for monolingual and bilingual SLPs based on the linguistic backgrounds of clients. The survey asked the participants about a clinical scenario where one client originated from an English speaking home while in the other client's home another language besides English was spoken. It was observed that both monolingual (68.1%) and bilingual (68.5%) SLPs were equally likely to recommend a client with possible concerns irrespective of the client's linguistic background. This exact question was also asked in a prior study by Kritikos (2003) to SLP participants. Kritikos (2003) reported that about 50% of monolingual and 51% of bilingual SLPs made similar

choices. The differences in percentages among the current study and the study by Kritikos (2003) indicates an overall positive change with regard to SLPs' likelihood for making appropriate recommendations for intervention for clients irrespective of their linguistic backgrounds.

Undergraduate and/or Graduate CLD Training for SLPs

When the undergraduate and/or graduate training of the SLPs was descriptively examined in the current study, approximately 86.9% (i.e., 293/337) of the SLPs reported completing one or more courses pertaining to serving CLD clients. More specifically, 49.3% (i.e., 105/213) of the bilingual participants reported that they received undergraduate or graduate training in second language acquisition in contrast to 31.5% (i.e., 39/124) of the monolingual SLPs. About 81.2% (i.e., 173/213) of the bilingual SLPs and 75.0% (i.e., 93/124) of the monolingual SLPs stated they had training in language differences versus disorders. Overall, the results show more training is available for SLPs working with CLD clients since previous studies indicated a lower percentage of SLPs reporting they received CLD training (Guiberson & Atkins, 2012; Kritikos, 2003). It is highly likely that training received during and after graduate school on understanding language acquisition in non-English speaking clients and on discriminating language difference and disorder, influenced similar trends between both groups in their recommendations for intervention. In conclusion, the current study shows positive trends towards an increase in resources and training for SLPs serving CLD clients compared to previous years.

Limitations and Future Directions

Although the current study provided insights about use of interpreters by monolingual and bilingual SLPs, the study has some limitations. Firstly, the study used an online survey to

gather data. There are numerous advantages to utilizing online surveys such as a wider geographical reach, cost, and rapid data collection (Evans & Mathur, 2005). However, the use of surveys can sometimes result in self-reporting biases as respondents are more likely to participate in specific surveys (Wright, 2005). Research has also shown that using online surveys results in middle-to-upper classes being over-represented within the participants (Yun & Trumbo, 2000). Furthermore, due to some unavoidable technological issues, some of the surveys had incomplete/missing responses, which were from statistical analyses. These drawbacks could have resulted in possible loss of data contributing to the overall study findings.

Another limitation of the study was the relatively small sample size. Although, the current study included a total of 337 participants, the sample size is not entirely representative of the SLP population based in the U.S. Therefore, the findings may not be generalized to the entire population of SLPs practicing in the U.S. In addition, the current study included an unequal number of monolingual and bilingual SLPs. This could have led to some possible loss of power to the study findings. Future studies with equal samples of monolingual and bilingual SLPs can be helpful to better understand the practices of these groups. Lastly, the present study included a non-uniform representation of participants from the different states and thereby some of the potential geographical and regional biases could have influenced some of the test results. In the future, it could be helpful to perform studies involving SLPs from all the 50 states and make the findings more applicable to the nation as a whole.

Conclusions

Overall, this study shows a positive increase in the number of SLPs working with CLD clients in the U.S. The study emphasizes the necessity of using language interpreters within the

field of speech-language pathology and highlights the need to educate ourselves in accommodating the needs of our growing diverse clientele. It is imperative that practicing SLPs educate themselves before they venture into the world of CLD service delivery. If utilized effectively, language interpreters can be great collaborators and facilitators in our service delivery to non-English-speaking clients and families. Future research should focus on the frequency of utilization of interpreters and the level of training received by SLPs to work with interpreters both during and after graduate school. In addition, it would be valuable to understand the experiences of language interpreters while working with SLPs and CLD clients and investigate perceived obstacles and successes of working with language interpreters. Training language interpreters on terminology involved in the field of speech-language pathology; helping them understand the services we provide and why we provide them, and including interpreters in patient counseling, would help bridge the gap between clients' communication with their service providers. The furthering of research in examining interpreters could provide SLPs with essential information that will assist them while providing assessment and treatment for CLD clients.

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Appendix

- 1. Select the topic/s that were taught in your undergraduate and/or graduate training.
 - Second language acquisition
 - Communication patterns in cultures where a language other than English is spoken
 - Differential assessment of bilingual versus monolingual individuals
 - Assessment tools for bilingual individuals
 - Language disorder versus language difference
 - Laws involved in the assessment and intervention of bilingual clients
 - How to utilize language interpreter
 - Cultural diversity and sensitivity in the assessment and treatment of communication disorders
 - Others
- 2. Do you work with languages interpreters in your clinical practice?
 - Yes
 - No
- 3. A client comes from a home where English and a language other than English are spoken. The client's comprehensive speech & language assessment places him in the borderline range for speech & language problems. Compared to a monolingual client with the same speech, language and cognitive skills, how likely would you be to recommend intervention for this client?
 - Equally Likely
 - Less Likely
 - More Likely