SURVEY OF CANADIAN SPEECH-LANGUAGE PATHOLOGY SERVICE DELIVERY TO LINGUISTICALLY DIVERSE CLIENTS

by

Claudette D'Souza

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Dedicated to Lois Harris:

Housemate, chef, leisure therapist, friend.

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ABSTRACT

An online survey of speech-language pathologists (SLPs) in Canada was conducted to determine the state of SLP service delivery to linguistically diverse clients. Data from 384 respondents from across Canada were analyzed. Results indicated that a majority of SLP respondents provide services to linguistically diverse clients; however, only a quarter provide services in the client's language(s). Several barriers to service delivery were identified as pervasive including not speaking the language(s) of their client; an inability to access other clinicians who speak their client's language(s), and no access to several key supports and resources for overcoming some of these barriers. Differences were noted between monolingual English participants and speakers of two or more languages. Comparisons were also made to data from US surveys. Results emphasize the need to increase the number of bilingual SLPs in Canada and to increase SLP access to supports and resources relevant to a linguistically diverse clientele.

LIST OF ABBREVIATIONS USED

ASHA	American Speech-Language-Hearing Association
ASL	American Sign Language
BAT	Bilingual Aphasia Test
CASLPA	Canadian Association of Speech-Language Pathologists and Audiologists
CELF-4	Clinical Evaluation of Language Fundamentals – Fourth Edition
CIHI	Canadian Institute of Health Information
EVIP	Échelle de vocabulaire en images Peabody
IDEA	Individuals with Disabilities Education Act
LSQ	Langue des signes québécoise
NCLB	No Child Left Behind
N-EEL	*Nouvelles epreuvre pour l'exam du langage*
PPVT-R	Peabody Picture Vocabulary Test - Revised
SLP	Speech-language pathologist
US	United States

GLOSSARY OF TERMS

Balanced bilinguals	Individuals who speak two languages with equal proficiency in both
Communication disorder	A deviation from the norm, where the norm is culturally and linguistically based
Communication difference	A deviation from the norm in one cultural context that is acceptable in and influenced by the norms in another cultural context
Interpreter	A specially trained individual who works in real time to translate oral or manual communication from one language to another
Linguistically diverse clients	Clients who are are bilingual, multilingual, a non-standard dialect user, or monolingual in a language that the clinician does not speak.
Sequential bilinguals	Individuals who learned their first language from birth and then learned a second language after 3 years of age.
Simultaneous bilinguals	Individuals who learned two languages at the same time, beginning before 3 years of age.
Translator	A specially trained individual who translates written text from one language to another

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CHAPTER 1: INTRODUCTION

Statement of Topic and Hypothesis

Canada houses an increasingly multicultural and multilingual population. Such a population often faces huge language barriers in accessing health care and education as a result of living in communities where their first language is not the language of service provision. As health care providers specializing in speech and language disorders, speech-language pathologists must be especially cognizant of these barriers and of the distinction between communication differences and communication disorders so as to appropriately assess and treat all clients (Adler, 1990, 1991; Crago & Westernoff, 1997; Juárez, 1983; Kritikos, 2003; Nicoladis & Genesee, 1997; Payne & Taylor, 2007; Roseberry-McKibbin, Brice, & O'Hanlon, 2005; Wyatt, 2002). The purpose of this study was to a) establish the need for and availability of speech-language pathology services to linguistically diverse clients in Canada in the language(s) they speak; b) to examine the barriers that speech-language pathologists in Canada face in providing such services; c) to determine the manners in which these barriers are overcome; and d) to investigate the relationships between variables, such as clinicians' language background and caseload composition, rating of barriers faced, and availability and use of supports/resources.

Results from this study were expected to indicate a high need for and low availability of speech-language pathology services to linguistically diverse clients in the language(s) they speak. The main barriers to providing services to linguistically diverse clients were

expected to include the clinician's lack of knowledge of the language, as well as a shortage in the availability of appropriate assessment and treatment tools in other languages (Adler, 1990; Centeno, 2009; Huang, Hopkins, & Nippold, 1997; Kritikos, 2003; Roseberry-McKibbin et al., 2005).

Review of Relevant Research

Demographic Change: Implications

Linguistically diverse individuals are those who speak one or more languages or dialects that are not the languages or dialects of the majority culture. Canada's population is becoming increasingly culturally and linguistically diverse. This has important implications for the nation's health care providers and educators. According to Statistics Canada (2006), 57.2% of the Canadian population report English as their first language and 21.8% report French, while 19.7% of the population report 'other'. As a result, 6.1 million linguistically diverse Canadians must access services in their communities, such as health care and education, in their non-native language. Outside of Quebec and New Brunswick, many of Canada's 6.8 million French speakers must do so as well. In order for individuals to receive appropriate care regardless of the language(s) they speak, the health care system and school boards must adjust to fit their needs. As the health profession specializing in speech, language, and communication, this fact is of particular importance to the field of speech-language pathology.

Difference vs. Disorder

Previous research in both Canada and the United States (US) has determined the need for changes within the field of speech-language pathology to better accommodate a multicultural and multilingual client population (Adler, 1990; Butler, 1994; Crago & Westernoff, 1997; Juárez, 1983; Roseberry-McKibbin et al., 2005; Taylor, 1986). Distinguishing between a *communication difference* and a *communication disorder* is a key assessment goal of speech-language pathologists working with individuals from diverse linguistic backgrounds (Battle, 2002; Crago & Westernoff, 1997; Payne & Taylor, 2007). A *communication disorder* is a deviation from the norm, and determination of the norm must be culturally and linguistically based (Payne & Taylor, 2007). A *communication difference* is a deviation from the norm in one cultural context that is acceptable in and influenced by the norms in another cultural context. For example, speakers of certain Spanish dialects who speak English as a second language are likely to pronounce 's' as 'th', which is the correct pronunciation in Spanish and some Spanish-influenced dialects (a difference). However, if such cultural norms are not considered, this substitution pattern may be inappropriately identified as an inter-dental lisp (a disorder) in English (Payne & Taylor, 2007).

In order to accurately assess and intervene with linguistically diverse clients, it is important to understand the cultural beliefs and behaviours of an individual, the rules that govern the dialect(s) and language(s) they speak (Kohnert, Kennedy, Glaze, Kan, & Carney, 2003) and the ways in which speech and language disorders are manifested in those dialects and languages (Battle, 2002; Flipsen, 1992; Jayanti, 2002). As well, an understanding of normal developmental processes in various languages and dialects is

critical (Hoff, 2005; Langdon, 2008). As many linguistically diverse individuals are bilingual or multilingual, an understanding of the phenomenon of bilingualism, the course of normal bilingual development and the differences and similarities between bilingualism and monolingualism is also critical for distinguishing a disorder from a linguistic difference (Langdon, 2008; Nicoladis & Genesee, 1997). Bilingualism is the norm in the majority of communities around the world (Brice & Brice, 2007; Hoff, 2005; Kayser, 2002). Language development in a bilingual individual is different from that of language development in a monolingual individual (De Houwer, 1999; Kayser, 2002; Nicoladis & Genesee, 1997; Thordardottir, 2006). For example, a bilingual child exposed to both languages from birth will have a vocabulary in one language which may be smaller than that of a monolingual child of comparable age in the same language. However, the size of a bilingual child's total vocabulary across both languages is comparable to that of a monolingual child's vocabulary in a single language (Hoff, 2005). If both languages are not taken into consideration, a bilingual child may appear delayed in comparison to a monolingual child (Nicoladis & Genesee, 1997).

Finally competently differentiating between a communication difference and a communication disorder requires clinicians to have an understanding of the processes involved in learning a second language. Second language learning is different from learning a first language (Hoff, 2005). The timing, length and frequency of exposure to a second language, the context of exposure and status of that language in society, and the underlying motivation to learn that language are some of many factors that influence the degree to which the language is learned. Errors are expected throughout the process, and it is important for clinicians to be aware of predictable errors and to not label them as

indicative of disordered speech or language (Langdon, 2008; Westernoff, 1991). An understanding of how two language systems interact when learning a second language then is vital to appropriately addressing issues arising from learning a second language, and identifying and treating an actual disorder (Flipsen, 1992).

As stated, a lack of knowledge of the many issues associated with providing services to a linguistically diverse population can lead to misdiagnoses. Misdiagnoses have been made in one of at least two ways. First, clinicians have misinterpreted differences as disorders and over-diagnosed speakers of non-standard dialects, different languages, bilinguals or second language learners as being language disordered (Adler, 1990; Ball & Bernhardt, 2008; Kritikos, 2003; Pray, 2003; Terrell & Terrell, 1983). This form of misdiagnosis results in an overrepresentation of linguistically diverse clients on the caseloads of speech-language pathologists (Adler, 1991; Brice & Brice, 2007; Roseberry-McKibbin, 1994; Spinelli, 2008; Terrell & Terrell, 1983). There has also been a tendency to under diagnose individuals from these same populations as clinicians become more aware of the presence of communication differences across languages and dialects, and incorrectly attribute an aspect of disordered communication to being a result of communication differences (Flipsen, 1992; Holland, 1983; Tonkovich, 2002). For example, clients who speak a tonal first language are more adversely affected by dysarthria in their first language than they might be in English (Tonkovich, 2002). While reduced prosody may not cause unintelligibility in English, a speaker of one of the many tonal Asian languages (e.g., Vietnamese) may mispronounce words, not via an incorrect segmental production, but because of an incorrect tonal pattern (Tonkovich, 2002). A clinician with no knowledge of tonal languages may not be able to distinguish between the various tonal

differences associated with a language or understand their importance, and may therefore overlook a valid problem. Similarly, Holland (1983) reports on a clinician who dismissed a woman's dysarthria as a characteristic of her 'black' dialect, failing to note that the woman's family spoke Standard English. As a result of growing criticism and litigation, Juárez (1983) reported that many monolingual clinicians, in fact, shy away from working with second language learners and clients of non-standard dialects. This is clearly not the answer to providing appropriate services to a linguistically diverse population.

Standardized Tests

As Centeno (2009), Kohnert et al. (2003), Kritikos (2003), and Roseberry-McKibbin et al. (2005) report, a major barrier to providing services to clients who speak a non-majority language or dialect in the US is the lack of appropriate assessment instruments. Indeed, the number of clinical resources available for English speakers is far greater than the number available in other languages (Huang et al., 1997; Langdon & Wiig, 2009; Spinelli, 2008; Terrell & Terrell, 1983). If a client's performance on a standardized test is to be compared against a group's performance, it is imperative that the group consist of comparable individuals with respect to language and culture (Garcia & Desrochers, 1997; Taylor, 1986; Thordardottir, 2006). However, standardized tests of speech and language are often developed in the United States and therefore rarely include Canadians in their standardization samples. Members of culturally and linguistically diverse populations are also rarely included. With respect to bilingual assessments, obtained scores should be compared to norms based on other bilinguals rather than on monolingual scores (Thordardottir, 2006). In standardizing tests, however, the normative sample usually consists of monolingual speakers of that language (Westernoff, 1991); second language

learners or bilingual/bidialectal individuals are rarely included (Adler 1990, 1991; Juárez, 1983). Consequently, in the absence of any communication disorder, even balanced bilinguals perform below monolingual norms on a standardized test (Genesee, Paradis, & Crago, 2004).

In addition, there is a dearth of standardized tests available for French-speaking individuals in Canada. Some, such as the *Nouvelles Epreuvre pour l'Exam du Langage* (N-EEL; Chévrie-Muller & Plaza, 2001), similar to the *Clinical Evaluation of Language Fundamentals - 4* (CELF-4; Semel, Wiig, & Secord, 2003) have been developed and normed in France, but norms are also available for Quebec French. A limited number of tests have been developed within Canada, such as the Bilingual Aphasia Test (BAT; Paradis, 1989) and the *Protocole Montréal-Toulouse d'examen linguistique de l'aphasie* (Nespoulous et al., 1992) or adapted for Canada's Francophone population, such as the French-Canadian MacArthur Inventory (Trudeau, Frank, & Poulin-Dubois, 1997, as cited by Boudreault, Cabirol, Poulin-Dubois, Sutton, & Trudeau, 2007) and the *Échelle de vocabulaire en images Peabody* (EVIP; Dunn, Thériault-Whalen, & Dunn, 1993), an adaptation of the *Peabody Picture Vocabulary Test - Revised* (PPVT-R; Dunn & Dunn, 1981). While some of these, for example the French-Canadian MacArthur Inventory, are sensitive tools with strong psychometric properties (Boudreault et al., 2007), others such as the BAT (reviewed by Le Dorze, 1991) and the *Protocole Montreal-Toulouse d'examen linguistique de l'aphasie*, have been criticized for being culturally biased by not considering the uniqueness of French-Canadian culture from French culture, or for having poor psychometric properties (Garcia & Desrochers, 1997). Tests with poor psychometric properties have poor validity. If the validity of assessment tools is called

into question, they become of little use in distinguishing between a disorder and a difference.

One strategy that has been used to overcome the lack of appropriate tests has been to translate existing tests into other languages (Garcia & Desrochers, 1997; Westernoff, 1991). The problems associated with translated versions of tests are manifold (Adler, 1990, 1991; Crago, Annahatak, Doehring, & Allen, 1991; Garcia & Desrochers, 1997; Juárez, 1983; Langdon & Wiig, 2009; Roseberry-McKibbin, 1994; Taylor, 1986; Westernoff, 1991). In translating a test, the variables that were controlled for in the original test often cannot be similarly controlled in the translated version (Garcia & Desrochers, 1997; Roseberry-McKibbin, 1994). Differences in structure and content between the two languages make direct translation a problem for the validity and reliability of any scores obtained on the translated version (Crago, et al., 1991; Langdon & Wiig, 2009; Roseberry-McKibbin, 1994). For example, a scoring system allocating points for correct use of the grammatical morpheme '-ed' marking past tense in English cannot be validly translated for a language in which the past tense marker is not a grammatical morpheme affixed to the verb root. Indeed, the structural differences across languages results in different developmental sequences for past tense forms.

Alternatives to Standardized Tests

Given the plethora of problems associated with standardized testing of linguistically diverse individuals, several alternatives have been suggested (Caesar & Kohler, 2007; Crago & Westernoff, 1997; Gutiérrez-Clellen & Simon-Cereijido, 2009; Peña, Iglesias, & Lidz, 2001; Roseberry-McKibbin, 1994). Caesar & Kohler (2007) advocate for a

descriptive approach involving the use of language sampling, interviews, direct observations, and rating scales. Gutiérrez-Clellen & Simon-Cereijido (2009) found that analyzing language samples of Spanish-English bilingual children in both languages helped identify language impairments with greater accuracy than standardized tests. Peña, Iglesias, & Lidz (2001) found that a dynamic assessment approach was more effectively able to differentiate between a language difference and a language disorder than a static measure of language ability in preschoolers. A detailed case history including knowledge of the languages used by the client and the contexts in which they are used is also important (Langdon, 2008; Roseberry-McKibbin, 1994). Roseberry-McKibbin (1994) stresses the importance of assessing communication in a functional setting and in natural contexts. Thus, in working with linguistically diverse clients, when valid standardized tools are not available, alternatives include non-standardised, naturalistic and dynamic assessment.

Bilingual and second language learners will manifest communication disorders in both languages (Juárez, 1983; Westernoff, 1991). Assessing in both languages is therefore essential for determining whether problems exist, especially since the relative strength of each language will often change over time. For example, if the second language learner has recently been heavily immersed in an environment where the language of the majority (i.e., the client's second language) is the exclusive language of communication (Westernoff, 1991; 1994), the client may experience a loss of first language ability. Such a language loss is quite common in a North American society that promotes assimilation and the speedy adoption of Standard English (Ball & Bernhardt, 2008; Kayser, 2002; Westernoff, 1994). Assessment of bilingual or second language learners is ideally carried

out by a bilingual speech-language pathologist with native or near-native competency in both languages (Crago & Westernoff, 1997; Juárez, 1983; Nicoladis & Genesee, 1997).

Interpreters and Translators

When clinicians who speak the client's language are not available, use of interpreters or translators has been recommended (American Speech-Language-Hearing Association [ASHA], 1985, 2004; Crago et al., 1991; Crago & Westernoff, 1997; Kambanaros & van Steenbrugge, 2004; Kohnert et al., 2003; Kostich & Weiss, 2007; Westernoff, 1991). Juárez (1983) cautions clinicians that important information can easily be lost in the translation process or incorrectly interpreted, yielding inaccurate data. Further, Kambanaros & Steenbrugge (2004) advise speech-language pathologists to ensure that the interpreter is well trained and knowledgeable about the typical responses and behaviours that are expected. The interpreter should also be aware of the importance of the evidence in the diagnosis of a communication disorder or they may adversely influence the assessment and intervention process (Kambanaros & Steenburgge, 2004). Crago et al. (1991) found that, when working with speakers of Inuktitut, using an Inuktitut-English interpreter as a mediator during assessment yielded results that were neither valid nor reliable. Instead, they trained an Inuk teacher to directly elicit and rate language samples in Inuktitut, and found the process time- and cost-efficient as well as conducive to eliminating possible cultural and linguistic biases.

Available Resources

To meet the needs of clinicians working with a linguistically diverse population, a variety of resources have been developed. Chapters on diversity have become standard in

language development and disorders texts. Many books have addressed the topic. For example, Butler (1994) addressed the needs of specific populations in her book on *Cross-cultural Perspectives in Language Assessment and Intervention.* A more recent publication by Langdon (2008), *Assessment & Intervention for Communication Disorders in Culturally & Linguistically Diverse Populations*, also provides specific information on some of the major cultural and linguistic groups that may be represented on a speech-language pathologist's caseload, and highlights strategies to be employed in appropriately assessing and treating a linguistically diverse population. In addition, Battle's (2002) book, *Communication Disorders in Multicultural Populations,* contains a chapter each on African Americans, Asian and Pacific Americans, Middle Eastern and Arabic Americans, Native Americans, and Latinos. McLeod (2007), in her book *The International Guide to Speech Acquisition*, writes more broadly about typical phonetic, articulatory, and phonological development in 24 languages other than English, and in 12 different dialects of English, including Canadian English. Designed specifically for speech-language pathologists, this book also includes chapters on such topics as speech acquisition in the context of multilingualism, cross-cultural influences, and second language learning, to further assist clinicians in identifying children from diverse backgrounds with speech delays or disorders. Langdon's (2002) book, *Interpreters and Translators in Communication Disorders: A Practitioner's Handbook*, is a useful resource for speech-language pathologists working with interpreters, as it provides a guideline for training interpreters to work with linguistically diverse clients. While many such resources exist, information specific to the Canadian context is scarce.

The majority of the research on the impact of multiculturalism and multilingualism on speech-language pathology services has been conducted in the US. This is not surprising, given that ASHA boasts a membership of 115,415 speech-language pathologists (ASHA, 2008) in comparison to the 6,661 speech-language pathologists in Canada (Canadian Institute of Health Information [CIHI], 2007). In the US, the No Child Left Behind Act of 2001 (NCLB; PL 107-110) and the Individuals with Disabilities Education Act of 2004 (IDEA; PL 108-446) contain specifics on service provision to bilinguals and children with limited English proficiency. The NCLB Act mandates that measures be taken to ensure that children with limited English proficiency are academically assessed in a language and format in which they can best demonstrate their knowledge. Schools are therefore required to make accommodations that may include testing in the child's first language or providing translation/interpretation services. IDEA asserts that service to second language learners or bilingual/bidialectal students in public schools must be in their first language. When a bilingual/bidialectal service provider is not available, the school must seek the services of a trained interpreter.

ASHA has published several position papers on the issue of multiculturalism and multilingualism to guide clinicians. A report on American English dialects contains guidelines for speech-language pathologists working with speakers of different dialects of American English (ASHA, 2003). Within this paper, ASHA outlines three required competencies for speech-language pathologists. Clinicians must acknowledge all dialects as rule-governed linguistic systems, understand the rules that govern the dialects spoken by their clients, and familiarize themselves with non-discriminatory and dynamic assessment procedures (ASHA, 2003). A publication by ASHA's Multicultural Issues

Board clearly details the knowledge and skills necessary to provide culturally and linguistically appropriate services (ASHA, 2004) to a diverse client population. The paper outlines the role of the clinician's culture and language in working with diverse populations. A series of cultural competencies are recommended for clinicians, such as recognizing training limitations in identifying and managing communication disorders/differences, developing appropriate relationships with translators and interpreters, and communicating appropriately with the client and the client's family so that all assessment and treatment methods are consistent with the client's values. The paper also addresses appropriate practice in the areas of language, articulation and phonology, voice and resonance, swallowing, and hearing. Further, ASHA's Code of Ethics mandates that clinicians provide competent services to clients, and without discrimination. In order to appropriately practice in a multilingual society, then, clinicians must increase their awareness and knowledge of cultural and linguistic differences, and must refer clients to clinicians with the appropriate skill sets when their own knowledge is not sufficient (ASHA, 2005).

Surveys of SLP Practice in the US

Several survey-studies have examined current speech-language pathology practice with a linguistically diverse population. Following a noted increase in the number of children with limited English proficiency in the US school system, Roseberry-McKibbin & Eicholtz (1994) conducted a national survey of 1,145 speech-language pathologists in public school settings in 1990 to examine service delivery to these children. A modified and expanded version of the same survey was administered in 2001 to 1,736 public school speech-language pathologists nationally. The newer study aimed to compare and

contrast the responses of clinicians surveyed in 1990 to those surveyed in 2001 (Roseberry-McKibbin, et al. 2005). Kritikos (2003) surveyed 811 speech-language pathologists in a variety of practice settings in five states in order to examine their beliefs about assessing bilingual/bicultural clients. To ensure her sample captured clinicians with bilingual/bicultural clients, Kritikos (2003) picked one state from each of five regions in the US with the highest proportion of linguistically diverse individuals. Kostich & Weiss (2007) surveyed 471 speech-language pathologists in US cities in which at least 10% of the population self-identified as speaking a language other than English at home. This national survey particularly examined speech-language pathologists' use of interpreters in working with linguistically diverse clients.

Several smaller-scale studies have been conducted as well. Kohnert et al. (2003) examined the caseload diversity of 104 speech-language pathologists in Minnesota. Caesar & Kohler (2007) surveyed speech-language pathologists in Michigan and looked specifically at 130 public school clinicians' actual assessment practices with bilingual clients in comparison to the guidelines laid out by ASHA and IDEA for dealing with this population. Finally, Centeno (2009) analyzed surveys from 33 clinicians in New York who worked with bilingual adults in neurological rehabilitation.

Across studies, the percentage of respondents with at least one linguistically diverse client on their caseload ranged from 46% (Roseberry-McKibbin & Eicholtz, 1994) to 95% (Kritikos, 2003). In contrast, the percentage of respondents with knowledge of a language other than English ranged from 6.2% (Caesar & Kohler, 2007) to 55% (Kritikos, 2003). The most commonly reported ethnic minority group represented on caseloads was Hispanic (Centeno, 2009; Roseberry-McKibbin & Eicholtz, 1994;

Roseberry-McKibbin et al., 2005). The top three languages reported by clinicians were Spanish, French and German (Kritikos, 2003), while the top three languages reported on caseloads were Spanish, Chinese and Korean (Kritikos, 2003), or Spanish, Arabic, and Chinese (Caesar & Kohler, 2007).

When barriers to providing appropriate services to linguistically diverse clients were studied, they were found to be quite similar across surveys. The most frequently encountered problems for clinicians were: lack of knowledge of the client's language, a lack of assessment and treatment instruments in languages other than English, a lack of developmental norms in other languages, and a lack of availability of professionals (including SLPs) with knowledge of the client's language (Centeno, 2009; Kohnert et al., 2003; Kritikos, 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005). This suggests that the barriers to service delivery in the US have not changed considerably over time.

With respect to assessment practices with linguistically diverse clients, contrary to ASHA (2004) and IDEA's guidelines, many speech-language pathologists reported using formal assessment procedures that were published as English measures (Caesar & Kohler, 2007; Centeno, 2009) rather than alternative informal procedures such as dynamic assessment. Instead of assessing in all the client's language(s), a large proportion reported assessing bilingual and second language learners solely in English (Caesar & Kohler, 2007). Caesar & Kohler (2007) found that the top two assessment instruments reportedly used by clinicians with linguistically diverse clients were standardized tests: the *Peabody Picture Vocabulary Test* and the *Clinical Evaluation of Language Fundamentals*. Language sampling was reportedly used by 33% (Caesar & Kohler, 2007) to 39% (Centeno, 2009)

of respondents. Although recommended by ASHA (2003), no respondents reported using dynamic assessment (Caesar & Kohler, 2007), while 33% collected a language acquisition history when conducting assessments (Centeno, 2009).

A large proportion of respondents reported employing the services of an interpreter in assessing and/or treating linguistically diverse clients (Caesar & Kohler, 2007; Centeno, 2009; Kostich & Weiss, 2007; Roseberry-McKibbin & Eicholtz, 1994). While the use of interpreters seems to be a common strategy when working with linguistically diverse clients, their availability varies depending on language, and their incorporation into the clinical process requires additional time on the part of the clinician (Kostich & Weiss, 2007). As well, more than 70% of monolingual and bilingual respondents in the study by Kritikos (2003) reported feeling *not competent* or *only somewhat competent* in working with an interpreter to assess a client who spoke a language that they did not. In addition, Kostich & Weiss (2007) found that more than 30% of respondents to their survey indicated that they had never received training in how to utilize interpreters in service delivery. At the same time, with respect to continuing education opportunities, only 25-47% of clinicians indicate a desire for further training in how to use an interpreter (Centeno, 2009; Kritikos, 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005).

With respect to treatment, both monolingual and bilingual clinicians felt that they would be more hesitant to label a bilingual client as having a language disorder than they would a monolingual client, because of their insufficient knowledge of the phenomenon of bilingualism (Kritikos, 2003). In addition, 80% of the bilingual clinicians in the study by Kostich & Weiss (2007) reported that they required interpreters. Hence, while clinicians

may report being 'bilingual', they may not have knowledge of a particular client's language. As well, it is their level of proficiency in the other language and how comfortable they feel about working with a bilingual client that matters more than simply being 'bilingual' (Kostich & Weiss, 2007; Kritikos, 2003).

Only 23.6% of respondents to the 1990 survey conducted by Roseberry-McKibbin & Eicholtz (1994) reported having received specific training at the graduate level for working with a multicultural client population. In contrast, Kohnert et al. (2003) reported that 47% of clinicians had received such training. Indeed, Roseberry-McKibbin et al. (2005) found a negative correlation between number of years in the field and the amount of academic preparation for working with a linguistically diverse population. This suggests that university programs may, in recent years, have begun to provide more coursework in this area. Even so, Centeno (2009), Caesar & Kohler (2007), and Kritikos (2003) report that respondents do not feel adequately prepared to work with diverse clients, and that there is not enough pre-service academic or clinical training for working with diverse clients.

In summary, it would appear that, despite the efforts undertaken by the government and ASHA, clinicians in the US are still struggling to meet expectations for working with a linguistically diverse population. In the US, 18% of the population report speaking a language other than English at home (US Census Bureau 2000). However, less than 2% of ASHA members report providing services in a language in addition to English (Karen Beverly-Ducker [Director of Multicultural Resources, ASHA], personal communication, 29 October 2008). Therefore, there is still a discrepancy in the number of clients on clinicians' caseloads who speak a language other than English and the number of

clinicians available who are fluent in those other languages. In fact, in reporting on the biggest barriers faced in providing services to a linguistically diverse client population, respondents indicate that some of the main challenges are a lack of knowledge of the client's first language (Centeno, 2009; Kohnert, et al., 2003; Roseberry-McKibbin et al., 2005; Roseberry-McKibbin & Eicholtz, 1994), and a lack of appropriate instruments for assessing the client's other language (Centeno, 2009; Kritikos, 2003; Roseberry-McKibbin et al., 2005; Roseberry-McKibbin & Eicholtz, 1994). These findings must be interpreted cautiously, as the majority of research focuses on clinicians who either all work in the school setting (Caesar & Kohler, 2007; Roseberry-McKibbin & Eicholtz 1994; Roseberry-McKibbin et al., 2005) or at least 50% do (Kohnert et al., 2003; Kostich & Weiss, 2007; Kritikos, 2003). Only the study by Centeno (2009) focuses specifically on clinicians working with an adult population in hospitals and rehabilitation centres.

The Canadian Context

The Canadian context is different from the US. Canada has two official languages, English and French, but also houses 6.1 million individuals who speak neither English nor French as a first language (Statistics Canada, 2006). Dialectal variation is present, particularly in the Atlantic provinces (Kiefte & Kay-Raining Bird, 2009) and the dialects are distinct from those in the US. French Immersion programs are available to children throughout Canada and have been in existence for over 30 years to encourage bilingualism. As well, Canada is home to 700 000 Aboriginal people who speak 50 different indigenous languages as well as varieties of English and French that are influenced by these languages (Ball & Bernhardt, 2008).

The Canadian Human Rights Act of 1996 (cited by Young & Westernoff, 1999) describes the right to equal treatment and services without discrimination, but there are no clear guidelines as to how this applies to clinical practice, in the field of speech-language pathology or elsewhere. A position paper published by the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA; Crago & Westernoff, 1997), aiming to provide "professional guidelines for the evaluation and treatment of clients from culturally and linguistically diverse populations" (Crago & Westernoff, 1997, p. 1), stresses the importance of assessment and intervention in the client's first language. As in the US, this recommendation may not be easily put into practice in Canada due to the limited number of bilingual speech-language pathologists. As Young & Westernoff (1999) reported, even in provinces with a high degree of cultural and linguistic diversity such as Ontario, practicing clinicians are not as linguistically diverse as the populations they serve.

The Francophone Population

Despite having two official languages in Canada, Quebec is the only province in Canada where the French-speaking population outnumbers the English-speaking (Statistics Canada, 2006), and New Brunswick is Canada's only officially bilingual province. Outside of Quebec and New Brunswick, French-speakers seeking speech-language pathology services often share the same problems as speakers of any non-official language and risk misdiagnoses by a clinician who does not speak French or have an awareness of the cultural and linguistic differences associated with the language. Often, French speakers must choose between receiving services in the majority language of their community and receiving no services at all (Garcia & Desrochers, 1997).

Within French Canada, there is an acute shortage of appropriate assessment tools (Boudreault et al., 2007; Garcia & Desrochers, 1997). Many of the assessment instruments used with French Canadians are either adapted or translated from standardized English versions or they are French tests designed in Europe for a population that speaks a different dialect of French. Information is also scarce on the cultural and linguistic norms of French Canadians (Boudreault et al., 2007; Garcia & Desrochers, 1997; MacLeod & McCauley, 2003), which further complicates appropriate assessment and treatment.

Given the Canadian context, findings from studies by Caesar & Kohler (2003), Centeno (2009), Kritikos (2003), Kohnert, et al. (2003), Roseberry-McKibbin & Eicholtz (1994), and Roseberry-McKibbin et al. (2005) may not apply to practitioners in Canada. There is currently only one study that has surveyed speech-language pathologists' provision of services to linguistically diverse clients in Canada (Kerr, Guildford, Kay-Raining Bird, 2003) and one survey of speech-language pathologists in Canada with specific experience working with Aboriginal children (Ball & Lewis, 2005). Kerr et al. (2003) surveyed the standardized test usage of 144 CASLPA members working with children. Thirty-percent reported working primarily with children who spoke French, and another 35% reported working primarily with children who spoke neither English nor French as a first language. Forty-five percent reported using English tests in assessing non-native speakers of English; 43% used the tests with their original norms. In response to these statistics, Kerr et al. (2003) argued that a lack of appropriate assessment tools in other languages is a barrier faced by speech-language pathologists in Canada, as well as those in the US. Of the 70 clinicians surveyed by Ball & Lewis (2005), less than 50% reported feeling well-

prepared to work with Aboriginal children, even after two years of experience, and 80% reported feeling that a whole new approach to service delivery was needed.

Justification of the Study

Canada's population is becoming increasingly culturally and linguistically diverse, and efforts must be made to provide culturally and linguistically appropriate services to this population within the field of speech-language pathology. Surveys of speech-language pathologists in the US have revealed that, while the diversity of the population has been increasing, the majority of speech-language pathologists are monolingual speakers of English (Centeno, 2009; Kohnert et al., 2003; Kostich & Weiss, 2007; Kritikos, 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005). These surveys also indicate that there are several barriers speech-language pathologists face in appropriately assessing linguistically diverse clients, including a lack of appropriate assessment tools in the client's language, and a lack of knowledge of the client's language. In addition, there do not appear to have been many changes in service delivery over the years. Given that there are some differences between Canada and US, it is possible that these findings cannot be extended to Canadian clinicians.

Thus, this study aimed to survey speech-language pathologists across Canada a) to establish the need for and availability of speech-language pathology service delivery to linguistically diverse clients in Canada in the language(s) they speak; b) to examine the barriers that speech-language pathologists face in providing such services; c) to determine the manners in which these barriers are overcome; and d) to investigate the

relationships between variables, such as clinicians' language background and caseload composition, rating of barriers faced, and availability and use of supports/resources.

CHAPTER 2: METHOD

Participants

The participants in this study were practicing speech-language pathologists across Canada with current caseloads, who completed an online questionnaire. The national association, the Canadian Association of Speech-Language Pathologists and Audiologists, provincial/territorial regulatory bodies (e.g., College of Audiologists and Speech-Language Pathologists of Ontario), and provincial/territorial associations (e.g., Speech and Hearing Association of Nova Scotia) were asked to partner in this study to assist in recruitment. Partner organizations made the link to the survey available in one or more of the following ways: a direct email to all SLP members with details of the study and a web link to the survey; inclusion of the web link within a monthly email to SLP members; or inclusion of the web link on the members-only section of the association's website. No identifying information was collected, and it was not possible to track surveys back to individuals. A reminder notice was sent two months after first contact via the same routes to increase response rates.

Survey Design

The online questionnaire included 26 items. It was made available in both English and French via Opinio, Dalhousie University's online survey program. As per the surveys administered by Caesar & Kohler (2007), Kohnert et al. (2003), Kritikos (2003), and Roseberry-McKibbin et al. (2005), items on this questionnaire (see Appendix A) included questions eliciting demographic information (#2-12), caseload information (#13-19),

barriers (#24) to offering speech-language pathology services to linguistically diverse individuals, and the supports/resources available to overcome those barriers (#21-22).

Demographic Items

To establish some key characteristics of the respondent population, participants were asked to specify their years of experience in the field, location and setting of practice, and their current clinical experience and practice with linguistically diverse individuals (Caesar & Kohler, 2007; Kohnert et al., 2003; Kritikos, 2003; Roseberry-McKibbin et al., 2005). Clinicians were also asked to report the languages they spoke, and to rate their proficiency in each language.

Caseloads

Respondents were asked to indicate their caseload size, the top five languages represented on their caseloads, the number of clients speaking each language, and the types of disorders represented on their caseload.

Barriers

Respondents were asked to rate the frequency with which they encountered potential barriers in providing services to linguistically diverse clients on a Likert-like scale (*very frequent; frequent*; *somewhat frequent*; *somewhat infrequent*; *infrequent*) as per the scale used by Roseberry-McKibbin et al. (2005). Potential barriers were adapted from the surveys conducted by Kohnert et al. (2003), Kritikos (2003), and Roseberry-McKibbin et al. (2005), and included, among others, the two major barriers identified in these three

surveys: a lack of appropriate assessment tools and a lack of knowledge of the client's language.

Supports/Resources

Clinicians were also asked about their access to and use of six supports/resources that have been identified in the literature as key to overcoming some of the barriers associated with service delivery to linguistically diverse clients (Crago et al., 1991; Crago & Westernoff, 1997; Hoff, 2005; Juárez, 1983; Kambanaros & van Steenbrugge, 2004; Kohnert et al., 2003; Nicoladis & Genesee, 1997; Payne & Taylor, 2007; Westernoff, 1991).

To establish validity of the instrument, the questionnaire was pilot-tested with one experienced speech-language pathologist each in Nova Scotia, New Brunswick, Quebec, Ontario, Northwest Territories, and British Columbia. Participants in the pilot-testing component of this study completed the survey and then provided feedback via phone or email regarding the organization, clarity, and appropriateness of the items on the questionnaire. The survey was modified to its current form in response to the feedback received from pilot testing.

CHAPTER 3: RESULTS

The survey was open for responses for ten weeks. The data file was downloaded from Opinio into the Statistical Package for the Social Sciences (SPSS; v. 17 for Windows) for analysis. Of the 668 surveys that were accessed, 394 (59%) were completed. Of the surveys completed, 10 did not meet the eligibility requirements – the respondents indicated *no* to the question of whether or not they were practicing speech-language pathologists in Canada with a current caseload. These were not analyzed further. Of the remaining 384 surveys, 308 were completed in English and 76 were completed in French. While the majority of practicing clinicians in Canada are members of the national and/or provincial associations and/or regulating bodies, it is not possible to determine the number of speech-language pathologists who actually saw the notice regarding the survey distributed by these organizations. Consequently, a response rate cannot be calculated.

Several questions regarding caseload make-up (#13-15), required respondents to indicate the total number of clients within a particular category (e.g., the number of adults and children on their caseloads) that they had seen in the last 12 months. However, 35.1% of respondents had difficulty estimating these numbers, and discrepancies from 1 to 500 were noted between subcategory numbers and totals. As well, a discrepancy was noted for 18.2% of respondents between the total percent of FTE reported and the total as calculated from percent of FTE worked across settings. The discrepancies ranged from 1 to 220%. As a result, the decision was made to analyze the *number* of respondents who indicated they worked at all with a particular client or in a particular setting rather than the number of participants or the percentage of FTEs reported. For all chi-square tests conducted, significance was set at $p < .05$ a priori.

Demographics

As shown in Table 1, all provinces and territories except the Yukon were represented in the sample, with the majority of respondents reporting work settings in Ontario (41.1%) or Quebec (21.9%). A chi-square goodness-of-fit test indicated that the sample distribution was not representative of the distribution of speech-language pathologists in provinces across the country (CIHI, 2007). Alberta, British Columbia, and Manitoba were under-represented, and New Brunswick, Nova Scotia, and Prince Edward Island were over-represented. No data comparison was available on the number of speech-language pathologists in the territories.

Linguistic Background

Participants were asked to list the languages (maximum of 5) that they spoke, and to rate their reading and writing proficiency, speaking fluency, and listening ability in each language based on a 6-point Likert-like scale (*Excellent, Very good, Good, Fair, Poor, Very poor)*. There were 32 languages reported (see Appendix A), with the top five being: English (n = 383); French (n = 285); Spanish (n = 61); German (n = 27); and Italian (n = 15). The majority of respondents reported English (n = 286) or French (n = 89) as their first language; however, Romanian, Spanish, Mandarin, Estonian, Portuguese, Russian, and Serbian were also listed as first languages. Of the 84 (21.9%) respondents who listed knowledge of only one language, all were monolingual English speakers. Monolingual English respondents were distributed across all provinces except Quebec and the territories. Of the 300 (78.1%) respondents who listed knowledge of two or more language, 188 were bilingual and 112 knew three or more languages. Of those who

reported knowledge of two or more languages, 285 (95%) reported knowledge of French and English. Of the 293 that went on to indicate where they had first learned their second language, 50 (17.1%) indicated that they learned it at home, 208 (71%) learned it in school, and 35 (11.9%) learned it in a country where that language was spoken.

Experience and Education

The number of years of experience in the field ranged from 0 to 39 years (M=11.6, SD = 8.9), with about half of respondents (195, 50.8%) reporting 10 or more years of experience, and half (189, 49.2%) reporting less than 10 years. Clinicians with 10 or more years of experience and those with less than 10 years of experience were evenly represented with respect to linguistic background. In the current sample, 374 (97.4%) respondents had Masters degrees in speech-language pathology; 286 (76.5%) completed their program in English, 86 (23%) in French, and 1 each in Portuguese and Romanian. In addition, 2 of the respondents with Masters degrees also reported holding doctoral degrees in speech-language pathology.

Work

The reported percentage of time worked ranged from 10-102% of a Full Time Equivalent (FTE; M = 91.8%, SD = 17%) and 283 (74%) respondents reported working 1 FTE. A total of 145 (37.8%) respondents indicated that they worked in more than one setting (Table 2). The largest proportion of respondents reported working in a school setting (154, 40.1%).

Caseloads

There were 235 (61.2%) respondents who had exclusively pediatric caseloads; 45 (11.7%) with only adult caseloads; and 104 (27.1%) with mixed pediatric-adult caseloads. 38 (9.9%) respondents provided English as a Second Language services; 26 (6.8%) French as a Second Language services; and 13 (3.4%) accent reduction services in their clinical practice.

Respondents reported on the linguistic make-up of their caseloads (Table 3). Monolingual English clients were represented on 84.4% of caseloads, while monolingual French clients and clients who were monolingual in another language were represented on 38.3% and 35.7% of caseloads respectively. Chi-square revealed that a larger proportion of monolingual English respondents reported monolingual English clients on their caseloads than did respondents with knowledge of two or more languages χ^2 (1, n = 384) = 19.1, p < .001. In contrast, in comparison to the monolingual English respondents, a greater proportion of respondents with knowledge of two or more languages reported having monolingual French clients χ^2 (1, n = 384) = 44.1, p < .001, clients with non-standard French dialects χ^2 (1, n = 384) = 6.5, p = .011, sequential bilinguals χ^2 (1, n = 384) = 9.4, p = .002, and simultaneous bilinguals χ^2 (1, n = 384) = 12.5, p < .001 on their caseloads.

The number of languages reported spoken by clients in any caseload ranged from 1 to 40 (M = 4.7, SD = 4.4), with 314 (81.8%) respondents reporting that two or more languages were represented on their caseloads. A total of 87 client languages (see Appendix B) were reported across the sample. After English (n = 268) and French (n = 190), the five

most common languages represented were: Spanish (n = 97); Arabic (n = 63); Urdu (n = 41); Mandarin (n = 35); and Punjabi (n = 34).

For the purposes of this survey, linguistically diverse clients were defined as clients who were bilingual, non-standard dialect users, or monolingual in a language that the clinician did not speak. There were 40 respondents who indicated that they did not work with linguistically diverse clients. Of the remaining 344 respondents, 82 (23.8%) indicated that they assessed/treated linguistically diverse clients in all the languages spoken by the client; 70 (20.3%) indicated that they assessed/treated in the client's strongest language; and 192 (55.8%) indicated that they assessed/treated only the languages they, the clinician, spoke.

Chi-square results found a significant difference between the number of monolingual English respondents and respondents with knowledge of two or more languages who reported assessing/treating linguistically diverse clients in all the client's languages χ^2 (1, n = 384) = 7.24, p = .007 or only in the languages they, the clinicians, spoke χ^2 (1, n = 384) = 4.93, p = .026. A larger proportion of respondents with two or more languages reported assessing/treating in all the languages spoken by the client, and conversely, a larger proportion of monolingual English respondents reported assessing/treating only in the language they themselves spoke.

Barriers

Respondents who worked with linguistically diverse clients (n = 344) were asked to rate the frequency with which they encountered certain barriers in assessing and treating linguistically diverse clients using the same scale. Table 4 shows the total number of

respondents who indicated encountering a given barrier *very frequently, somewhat frequently,* or *frequently*. The three barriers rated by the largest number of respondents as frequently encountered were *a lack of appropriate less biased assessment instruments* (276, 80.2%), *a lack of availability of other speech-language pathologists who speak the client's language(s)* (251, 73%) and *don't speak the language of the client being assessed.* This pattern of response was also seen with respondents with knowledge of two or more languages. However, the pattern of response differed for monolingual English respondents. The barrier rated by the largest number of monolingual English respondents as frequently encountered was: *don't speak the language of the client being assessed.* Chi-square results indicated differences in the number of monolingual English respondents and respondents with two or more languages reporting frequently encountering three of the listed barriers: *Don't speak the language of the client being assessed* χ^2 (1, n = 344) = 5.72, p = .016; *Lack of availability of interpreters who speak the client's language* χ^2 (1, n = 344) = 5.21, p = .022; and *lack of knowledge about second language acquisition* χ^2 (1, n = 344) = 4.45, p = .034. More monolingual English respondents than speakers of two or more languages reported frequently facing each of these three problems.

Supports/Resources

Respondents who reported working with linguistically diverse clients were then asked to identify whether they had access to various supports or resources (Table 5) and, if so, to rate the frequency (*Always, Frequently, Infrequently, Never)* with which they used them when working with linguistically diverse clients (Table 6). Between 24.7 and 27% of respondents reported having *no access* to four of the six supports/resources: bilingual

SLPs; assessment tools in the client's language(s); speech and language norms in the client's language(s); and training to work with linguistically diverse clients. In contrast, almost all clinicians reported having access to cultural information. Chi-square results indicated a larger proportion of monolingual English respondents reported no access to assessment tools in the client's language(s) χ^2 (1, n = 344) = 7.63, p = .005 and no access to speech and language norms in the client's language(s) χ^2 (1, n = 344) = 5.05, p = .024 than did respondents with knowledge of two or more languages. When clinicians had access to these resources, cultural data, interpreters and training were more often used *always* or *frequently*. In addition, in comparison to monolingual English respondents, a significantly larger proportion of respondents with knowledge of two or more languages reported *always* or *frequently* using: bilingual SLPs χ^2 (1, n = 344) = 11.65, p < .0001; assessment tools in the client's language(s) χ^2 (1, n = 344) = 10.16, p = .001; speech and language norms in the client's language(s) χ^2 (1, n = 344) = 7.74, p = .005; and training to work with linguistically diverse clients χ^2 (1, n = 344) = 4.2, p = .040.

Respondents were asked to rate their frequency of use of various assessment strategies using the same scale as described for use of supports (see Table 7). A large majority of respondents reported *always* or *frequently* using naturalistic observations (91.8%), language samples (85.8%), and dynamic assessments (71.8%). Chi-square revealed significant differences between monolingual respondents and respondents with two or more languages in the use of standardized tests in French χ^2 (1, n = 344) = 23.68, p < .001; standardized tests in the client's strongest language χ^2 (1, n = 344) = 12.88, p < .001; and standardized tests translated into the client's strongest language χ^2 (1, n = 344)

= 126.47, $p < .001$. In all three cases, significantly fewer monolingual respondents reported using these tests than respondents with two or more languages.

CHAPTER 4: DISCUSSION

The purpose of this study was to a) establish the need for and availability of speech-language pathology services to linguistically diverse clients in Canada in their own language(s); b) to examine the barriers that speech-language pathologists face in providing such services; c) to determine the manners in which those barriers are overcome; and d) to investigate the relationships between variables, such as clinicians' language background and caseload composition, rating of barriers faced, and availability and use of supports/resources.

Data from 384 respondents were analyzed. Although the sample distribution was not strictly reflective of the distribution of speech-language pathologists across provinces (CIHI, 2007), all regions of the country were represented and the more populated provinces had larger numbers of respondents. Eighty-four respondents were monolingual English speakers and 300 reported speaking two or more languages. Both sets of respondents were distributed across provinces and territories in a manner that is reflective of the linguistic make-up of the general population in each province territory (e.g., no monolingual English respondents from Quebec). In addition, approximately half of respondents had less than 10 years of experience and half had 10 or more years of experience, a distribution that was approximated within each province and territory as well. Thus, results from this survey may be generalized to the larger population of speech-language pathologists across the country, and in particular, conclusions may be drawn regarding the practices of monolingual English clinicians and clinicians with knowledge of two or more languages across Canada.

Service Availability

Research suggests that appropriate assessment and treatment of any client should be carried out in the language(s) the client uses (e.g, Crago et al., 1991; Crago & Westernoff, 1997; Kayser, 2003; Nicoladis & Genesee, 1997; Roberts, 2002; Westernoff, 1994). Of the 344 clinicians who reported providing services to linguistically diverse clients, almost a quarter reported acting in a manner consistent with this suggestion and assessing and treating in all of the client's language(s). However, more than half reported assessing and treating only in the languages that they themselves spoke, which is contrary to best practice. While it is possible that clinicians are not aware of what is best practice, it is more likely that clinicians have limited access to the supports/resources for implementing best practice, such as access to bilingual SLPs or interpreters.

Given that, as a group, the responding clinicians spoke 32 different languages, while their clients spoke 87 different languages, it is clear that these clinicians cannot assess and treat all clients on their caseloads in the clients' language(s) without assistance. This suggests that direct speech-language pathology services in the client's language(s) are not readily available to many linguistically diverse clients, and that efforts should be made to increase the linguistic diversity of clinicians practicing in Canada.

Barriers

In the present study, 72% of clinicians recognized that not speaking the language(s) of their clients was frequently a barrier to service delivery. An almost equal number reported that they were unable to access a clinician who could speak their client's language(s). CASLPA (Crago & Westernoff, 1997) suggests that, when a professional

does not speak a client's language, referral to a clinician who does speak the language is appropriate. It would appear that the clinicians in this study were often aware that this would be a preferred choice, but did not have that option. Once again, the need for recruiting more speech-language pathologists who speak languages other than English is highlighted.

There is a documented dearth of assessment tools in languages other than English (Huang et al., 1997; Langdon & Wiig, 2009; Spinelli, 2008; Terrell & Terrell, 1983). Therefore, it is not surprising that the barrier reported by the largest percentage of respondents was a lack of availability of appropriate less-biased assessment instruments. The lack of appropriate assessment instruments has a serious impact on the ability of clinicians to accurately diagnose communication disorders in linguistically diverse clients. The consequence is that linguistically diverse clients may be over-diagnosed and placed on caseloads when they do not need to be (Adler, 1990; Ball & Bernhardt, 2008; Kritikos, 2003; Pray, 2003; Terrell & Terrell, 1983), or, perhaps worse, they may be under-diagnosed and have a communication disorder that is dismissed as a communication difference (Flipsen, 1992; Holland, 1983; Tonkovich, 2002). Clearly, it is critical that assessment instruments be developed that can be used validly and reliably for diagnostic purposes with clients from many language and cultural backgrounds.

Supports/Resources

Specific resources and supports have been identified in the literature (Crago et al., 1991; Crago & Westernoff, 1997; Hoff, 2005; Juárez, 1983; Kambanaros & van Steenbrugge, 2004; Kohnert et al., 2003; Nicoladis & Genesee, 1997; Payne & Taylor, 2007;

Westernoff, 1991) and by ASHA (2003, 2004, 2005) and CASLPA (1997) as key to addressing some of the barriers associated with providing appropriate service delivery to linguistically diverse clients. In particular, working with well-trained interpreters is a critical alternative for clinicians given the lack of speech-language pathologists with knowledge of the languages spoken by clients (Crago et al., 1991; Kambanaros & van Steenbrugge, 2004; Westernoff, 1991). While almost 85% of respondents reported having access to interpreters, less than half reported using them *always* or *frequently* when working with linguistically diverse clients.

There are several reasons why clinicians may not use an interpreter when one is available. One reason could be a lack of training in how to utilize them (Kostich & Weiss, 2007; Kritikos, 2003). As well, successful incorporation of interpreters into the clinical process is dependent upon the clinician ensuring that the interpreter has: native proficiency in the client's language(s), a knowledge of professional terminology, assessment and treatment principles, and basic interview skills (ASHA, 2004). Clinicians may not have the time necessary for appropriately training an interpreter. Other reasons for not using available interpreters may be an inability to cover the financial costs associated with using an interpreter or the lack of availability of an interpreter for a particular client's language. In the absence of a professional interpreter, a clinician may use a client's family members or other staff members as an alternative during assessment and treatment. However, this is not ideal, as information can be lost or altered by such untrained interpreters, and in the case of the incorporation of family members, the information conveyed may be unknowingly biased.

Knowledge about the client's culture, and speech and language norms in the client's language are excellent resources for clinicians to have access to. Almost all clinicians reported having access to cultural knowledge, and of these, approximately 75% reported using them *always* or *frequently*. However, approximately 75% also reported that they had no access to training to work with linguistically diverse clients. Thus, while it seems that clinicians do have some amount of background cultural knowledge, continuing education opportunities on working with linguistically diverse clients do not appear to be easily available.

Between 72% and 92% of clinicians reported using naturalistic observations, language samples, or dynamic assessments frequently when assessing linguistically diverse clients. Such strategies are vital in gathering information supplementary to that obtained through formal procedures. Such practices are also consistent with literature suggesting that in the absence of valid, standardized assessment tools, such strategies are the best alternatives (ASHA, 2003; Caesar & Kohler, 2007; Crago & Westernoff, 1997; Gutiérrez-Clellen & Simon-Cereijido, 2009; Peña, Iglesias, & Lidz, 2001; Roseberry-McKibbin, 1994). The information gathered from informal assessments would be more easily interpreted if the speech-language pathologist could make comparisons to speech and language norms in the client's language. However, over 70% of clinicians reported that they did not have access to speech and language norms in the client's language(s) and 68% recognized the lack of knowledge of development norms as a barrier to service delivery,

In general, it appears that clinicians are aware of the complexities involved in providing appropriate services to linguistically diverse clients. They are currently using a variety of

resources, supports, and strategies recommended for appropriate service delivery despite being faced with several challenges.

Monolingual versus multilingual clinicians

As a group, clinicians who were monolingual differed from those who spoke two or more languages with respect to their provision of services to linguistically diverse clients. In terms of service availability, a significantly larger proportion of clinicians who spoke two or more languages reported assessing and treating clients in all their languages than did monolingual English respondents. Conversely, a significantly larger proportion of monolingual English respondents reported assessing and treating clients only in the language they themselves spoke. This may be for several reasons. Monolingual English clinicians may have limited access to the supports/resources providing services in the client's language(s), such as access to bilingual SLPs or interpreters. It is also possible that, because of their own monolingual backgrounds, monolingual English clinicians may not be aware of the necessity to assess and treat in the language the client speaks. However, given that these clinicians are able to identify barriers to appropriate service delivery, it is more likely the case that monolingual English clinicians are aware of the need to assess and treat in the client's language(s), but lack the knowledge and skills required to do so appropriately. This suggests that optimal service is more readily available for linguistically diverse clients accessing services from clinicians with knowledge of two or more languages than from monolingual English clinicians—a further reason to recruit more clinicians who speak languages other than English.

In comparison to the monolingual English clinicians, a significantly larger proportion of clinicians with knowledge of two or more languages reported *always* or *frequently* using bilingual SLPs, assessment tools in the client's language(s), speech and language norms in the client's language(s), and training to work with linguistically diverse clients. The difference between the two groups may be attributed to the fact that speakers of two or more languages are more aware of how to use certain supports/resources, or, because of their own linguistically diverse backgrounds, are more aware of the impact of linguistic diversity on speech and language assessment and treatment.

There was no difference between groups in their access of interpreters. Clearly, knowledge of two or more languages does not guarantee that a clinician will know the client's particular language(s). This also implies that monolingual clinicians will not simply be able to refer linguistically diverse clients to their linguistically diverse colleagues. Therefore, given the documented usefulness of interpreters in working with linguistically diverse clients, greater access to interpreters, and training in their appropriate use is warranted.

A larger proportion of monolingual English respondents reported having no access to assessment tools in the client's language(s) and speech and language norms in the client's language(s) than speakers of two or more languages. This could be because of the communities in which both sets of respondents live. Although we do not have data to examine this question, it is plausible that clinicians who speak two or more languages live in communities with higher densities of linguistically diverse clients and higher densities of other clinicians who speak two or more languages. This tends to lead to the acquisition or creation of resources to try to meet the needs of the community.

In the present study, a difference in the pattern of responses was noted between how monolingual English respondents and respondents with knowledge of two or more languages rated the barriers faced. The inability to speak the language of the client being assessed was the most commonly encountered barrier for the monolingual English respondents. The barriers reportedly faced by monolingual clinicians and clinicians who speak two or more language differed significantly on only three of the ten barriers examined. Given the differences noted in the responses of monolingual English clinicians and clinicians with knowledge of two or more languages, it seems that monolingual English clinicians in particular must be provided with increased access to supports/resources to assist them in overcoming the barriers to providing linguistically diverse clients with appropriate services. However, even clinicians with knowledge of two or more languages would benefit from increased access to supports/resources and continuing education on how to use the supports/resources and how to provide appropriate services to linguistically diverse clients.

Comparisons to US Surveys

While several similar surveys have been conducted in the US as far back as 1994 (Centeno, 2009; Kohnert et al., 2003; Kritikos, 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005), this is the first study of its kind in Canada. Results indicate that the challenges surrounding service delivery to linguistically diverse clients are not limited to the US.

Service Availability

Comparing service availability between the two countries, we see the same mismatch between the languages spoken by clinicians and those spoken by clients. The most common language other than English spoken by clinicians and clients in Canada was reported to be French. Given that French is one of Canada's official languages, that there is a large Francophone population in Canada, and that French Immersion programs have fostered the use of French throughout Canada, this was to be expected. In the US (Kritikos, 2003), the most common language other then English spoken by clinicians and clients was Spanish. After English and French, the five most common languages spoken by clinicians were Spanish, German, Italian, ASL, and LSQ. In contrast, the five most common languages represented on caseloads, after English and French, were Spanish, Arabic, Urdu, Mandarin, and Punjabi. After English, Spanish, French, German, and Italian were also the top languages spoken by clinicians in the US, possibly because of the high availability of university-level courses in those languages (Kritikis, 2003).

Barriers

With respect to the barriers faced in providing appropriate services to linguistically diverse clients, the pattern of responses in this study is in accordance with the findings of Kohnert et al. (2003), Kritikos (2003), and Roseberry-McKibbin et al. (2005). The difference in the pattern of responses between monolingual English respondents and respondents with knowledge of two or more languages was also the noted in the study by Kritikos (2003). In both, the current study and the study by Kritikos (2003), the main

barrier to service delivery for monolingual clinicians was a lack of knowledge of the client's language(s).

Assessment Strategies

Assessment strategies used by clinicians appear to be different in Canada. Caesar and Kohler (2007) asked participants to list five tests or informal procedures that they used in assessing bilingual students' language abilities. Only 33% reported using language sampling and 10% reported engaging in naturalistic observations, while dynamic assessment was not mentioned. However, when respondents in the present study were asked to rate the frequency with which they used a variety of assessment strategies including formal assessment instruments, a much larger proportion reported using informal assessment strategies. Approximately 90% report using naturalistic observations, 85% report taking language samples, and 70% report using dynamic assessments. This suggests that there are some differences between speech-language pathology practices in the US and Canada, at least with respect to the assessment strategies employed in working with linguistically diverse clients. It suggests that perhaps Canadian clinicians are more knowledgeable than their US counterparts. Alternatively, clinicians in the US may have more access to resources for working with linguistically diverse clients and so, they do not need to rely on such assessment strategies as much as Canadian clinicians.

Limitations & Future Research

There are three limitations to this study that must be acknowledged. Firstly, surveys from 384 clinicians were analyzed. While response rate cannot be accurately calculated

because of the nature of participant recruitment, there are 6,661 speech-language pathologists in Canada (CIHI, 2007). The sample size may be considered relatively small in comparison to the population of clinicians in Canada. However, given that the entire population was sampled, a response rate of 5% may also be considered representative of the population. Future research should consider ways in which to increase response rates, perhaps by contacting potential respondents directly via email, or mailing out the surveys with stamped, self-addressed envelopes for easy return. Compensation may also be offered as incentive for participation.

Secondly, 78.1% of respondents reported speaking two or more languages. Given the nature of the study and its focus on service delivery to linguistically diverse clients, it appears that participants were self-selecting based on their own linguistic backgrounds and their experience with linguistically diverse clients. Given that clinicians with knowledge of two or more languages were over-represented in the present sample, and given that they, as a group, responded differently on the survey in comparison to their monolingual colleagues, it is likely that many of the issues raised in examining the sample as a whole were more representative of those clinicians than of their monolingual colleagues.

Further research could be conducted focusing solely on the clinical practices of monolingual clinicians in order to create a clearer picture of the challenges they face and to examine how best to assist them in providing appropriate services. Similarly, further research could be conducted to examine, in greater detail, the practices of clinicians who speak two or more languages. To gather more information, future surveys should contain more open-ended questions, or be conducted in an interview-style. As well, an important

item to include in future survey studies, which was not included in this study, would be the languages in which clinicians offer speech-language pathology services.

Finally, there were discrepancies noted between subcategory numbers/percentages and totals. Making the decision to work with the *number* of respondents reporting any number greater than zero within a category rather than working with the number reported *within* each category may have caused a loss of data that would have otherwise provided greater insight into some of the issues associated with service delivery to linguistically diverse clients. For example, consider a monolingual English clinician with 100 clients on her caseload, of which 1 was a monolingual English while 99 were monolingual in another language. If this clinician had no access to bilingual SLPs or interpreters, this would be of greater concern than if she had 99 monolingual English clients and 1 client who was monolingual in another language. However, the data extracted from the present study would only indicate that this particular clinician had both monolingual English clients and clients who were monolingual in another language on her caseload. Despite the loss of further data, it is not likely that the findings that were extracted were adversely affected.

CHAPTER 5: CONCLUSIONS

Canada takes pride in being a country that supports and promotes multiculturalism and multilingualism. While diversity in a population should be celebrated, ensuring that all individuals in a diverse population have equal access and equal quality of service is a formidable challenge. Speech-language pathologists, the professionals responsible for treating individuals with communication disorders, are especially challenged when working to accurately assess and appropriately treat linguistically diverse clients. Surveys on service delivery to linguistically diverse clients have been conducted in the US as far back as 1994. In addition, CASLPA published a position paper in 1997 outlining the need for change to better serve Canada's increasingly diverse population. Data from the present survey show that practice with linguistically diverse clients appears to have changed little over the last 15 years. As well, despite the contextual differences, the challenges that clinicians experience appear to be similar in the US and Canada with respect to service delivery to linguistically diverse clients.

Data from the current study suggest that clinicians may benefit from continuing education in a variety of topics. More education can be provided on best practice with linguistically diverse clients, particularly highlighting the importance of assessing and treating in the client's language(s). Monolingual clinicians in particular may benefit from training in this area. As it is not likely that clinicians will speak the language(s) of every client they work with, training could also be provided on the effective use of interpreters in providing services to linguistically diverse clients. Training of this type may increase the use of interpreters by clinicians who have access to them.

There is a much that can be done to ensure that clients have access to services in their own language(s). Results from this study suggest that increasing the number of bilingual speech-language pathologists should not be the only solution, as being bilingual does not guarantee that the clinician will speak the language(s) of the client. Speech-language pathology regulatory bodies and associations/organizations must work to increase the availability of supports/resources necessary for service provision to linguistically diverse clients.

Despite the use of alternative assessment strategies such as language sampling, dynamic assessment, and naturalistic observations to overcome barriers, there may be a negative impact on accuracy and quality of service delivery to linguistically diverse clients in the absence of formal assessment tools. The creation of assessment tools specifically for linguistically diverse clients in a Canadian context is warranted. Efforts must be made to acquire or document speech and language norms for the wide variety of languages represented on clinicians' caseloads, as these would compliment some of the informal assessment strategies currently being used.

Well-trained interpreters are required, given their documented usefulness in the literature (Crago et al., 1991; Kambanaros & van Steenbrugge, 2004; Westernoff, 1991), but reported under-utilization by some clinicians and lack of access of others in the present study. Interpreters should not only have proficiency in the client's language, but also excellent interviewing skills, a knowledge of speech and language terminology, and an understanding of assessment and treatment principles (ASHA, 2004). If such interpreters were readily available to clinicians, perhaps their frequency of use would increase.

Regulatory bodies and associations/organizations must also work towards alleviating the financial costs associated with using interpreters.

Given that we as a profession work in the area of speech, language, and communication, it is critical that we provide appropriate services to all our clients, including those who are linguistically diverse. Ultimately, changes must be made to how the profession approaches such clients, to ensure high quality service delivery to clients regardless of their linguistic background.

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Appendix A

Tables

Table 1

Respondents' Current Province/Territory of Work

Province/Territory	# of respondents	% of sample (n = 384)	# of Canadian SLPs (CIHI, 2007)	% of Canadian SLPs (n = 6661)
Ontario	158	41.1%	2487	37.3%
Quebec	84	21.9%	1478	22.2%
Alberta	36	9.4%	936	14%
New Brunswick	31	8.1%	179	2.7%
Nova Scotia	23	6%	174	2.6%
British Columbia	18	4.7%	737	11%
Saskatchewan	13	3.4%	234	3.5%
Newfoundland & Labrador	8	2.1%	95	1.4%
Prince Edward Island	6	1.6%	26	0.4%
Northwest Territories	4	1%	No data	No data
Manitoba	2	0.5%	299	4.5%
Nunavut	1	0.3%	No data	No data
Yukon	0	0%	No data	No data
TOTAL	**384**		**6661**	

Table 2

Summary of Respondents' Work Settings

Setting	# of respondents	% of sample (n=384)
School	154	40.1%
Hospital	90	23.4%
Preschool	79	20.6%
Private practice	76	19.8%
Clinic	56	14.6%
Rehabilitation Centre	55	14.3%
Community Centre	25	6.5%
College or University	9	2.3%
Other	44	11.5%

Note. Numbers do not add up to 384 because 145 respondents reported working in multiple settings.

Table 3

Types of Clients Represented on the Caseloads of Monolingual English Respondents and Respondents with Knowledge of Two or More Languages

	Total (n = 384)		Monolingual English (n = 84)		Two or more languages (n = 300)	
Clients	#	%	#	%	#	%
Monolingual English speakers	324	84.4%	84	100%	240	80%
Monolingual French speakers	147	38.3%	6	7.1%	141	47%
Monolingual in another language	137	35.7%	29	34.5%	108	36%
Speakers of a non-standard English dialect	70	18.2%	15	17.9%	55	18.3%
Speakers of a non-standard French dialect	22	5.7%	0	0%	22	7.3%
Sequential bilinguals	263	68.5%	46	54.8%	217	72.3%
Simultaneous bilinguals	254	66.1%	42	50%	212	70.7%

Note. Sequential bilinguals were defined as individuals who learned their first language from birth and then learned a second language after 3 years of age. Simultaneous bilinguals were defined as individuals who learned two languages at the same time, beginning before 3 years of age.

Table 4

Problems Encountered Very Frequently, Frequently, or Somewhat Frequently in Serving Linguistically Diverse Clients

	Total (n = 344)	Monolingual English (n = 72)	Two or more languages (n = 272)
Lack of appropriate less biased assessment instruments	276 80.2%	52 72.2%	224 82.4%
Lack of availability of other speech-language pathologists who speak the client's language(s)	251 73%	58 80.6%	193 71%
Don't speak the language of the client being assessed	248 72.1%	60 83.3%	188 69.1%
Lack of knowledge of developmental norms in the client's language	234 68%	50 69.4%	184 67.6%
Lack of knowledge about the client's culture	194 56.4%	41 56.9%	153 56.3%
Difficulty distinguishing a language difference from a language disorder	158 45.9%	29 40.3%	129 47.4%
Lack of time to administer appropriate assessment.	153 44.5%	27 37.5%	126 46.3%
Lack of availability of interpreters who speak the client's language(s)	132 38.4%	36 50%	96 35.3%

	Total (n = 344)	Monolingual English (n = 72)	Two or more languages (n = 272)
Lack of knowledge about bilingualism or bilingual development	97 28.2%	26 36.1%	71 26.1%
Lack of knowledge about second language acquisition	95 27.6%	27 37.5%	68 25%

Table 5

Number and Percentage of All Clinicians (n=344) and those who were Monolingual English or Spoke Two or More Languages who Reported having No Access to Various Supports/Resources

	Supports/Resources Not Available		
	Total (n = 344)	Monolingual English (n = 72)	Two or more languages (n = 272)
Interpreters	53 15.4%	14 19.4%	39 14.3%
Bilingual SLPs	85 24.7%	22 30.6%	63 23.2%
Assessment tools in the client's language(s)	90 26.2%	28 38.9%	62 22.8%
Speech and language norms in the client's language(s)	93 27.0%	27 37.5%	66 24.3%
Cultural knowledge	24 6.9%	3 4.2%	21 2.6%
Training to work with linguistically diverse clients	82 23.8%	16 22.2%	66 24.3%

Table 6

Number and Percentage of All Clinicians (n=344) and those who were Monolingual English or Spoke Two or More Languages who Reported having Both Access to Various Resources/Supports and Using them "Always" or "Frequently".

	Reported Using Resources/Supports "Always" or "Frequently"		
	Total (n = 344)	Monolingual English (n = 72)	Two or more languages (n = 272)
Interpreters	123/291 42.3%	22/58 40%	101/233 43.3%
Bilingual SLPs	64/259 24.7%	3/50 6%	61/209 29.2%
Assessment tools in the client's language(s)	66/254 26%	3/44 6.8%	63/210 30%
Speech and language norms in the client's language(s)	56/251 21.8%	3/45 6.7%	53/206 25.7%
Cultural knowledge	240/320 75%	49/69 71%	191/251 76.1%
Training to work with linguistically diverse clients	111/262 42.4%	17/56 30.4%	94/206 45.6%

Note. Percentages are based on total number responding to the item (n) minus respondents reporting no access to the support/resource.

Table 7

Use of Assessment Strategies with Linguistically Diverse Clients

	Use (*Always + Frequently)*		
	Total (n = 344)	Monolingual English (n = 72)	Two or more languages (n = 272)
Standardized tests in English	226 65.7%	48 66.7%	178 65.4%
Standardized tests in French	71 20.6%	0 0%	71 26.1%
Standardized tests in the client's strongest language	58 16.9%	2 2.8%	56 20.6%
Standardized tests translated into the client's strongest language	79 22.9%	7 9.7%	72 26.5%
Standardized tests adapted for a particular client	107 31.1%	16 22.2%	91 33.5%
Naturalistic observations	316 91.8%	67 93.1%	249 91.5%
Language samples	295 85.8%	61 84.7%	234 86%
Dynamic assessments	247 71.8%	50 69.4%	197 72.4%

Appendix B

Survey of Speech-Language Pathology Service Delivery

Q1. Are you a practicing speech-language pathologist in Canada with a current caseload?

__ Yes
__ No

Q2. How many years in total have you been working as a speech-language pathologist?

__ years

Q3. Highest degree in Speech-Language Pathology (i.e., Communication Sciences and Disorders) completed:

__ Bachelors
__ Masters
__ PhD

(If 'Bachelors', participants skip Q4-Q6)

Q4. Year Masters degree in speech-language pathology received:

____

Q5. What was the language of instruction in your Master's program?

__ English
__ French
__ Other (please specify): _____

Q6. Where do you currently work?
_____ *(Drop-down menu –Province/Territory–)*
City/Town:_____

Q7. What percent of a full time equivalent (FTE) do you currently work (e.g., 2 days per week = 40%)?

__%

Q8. What percent of full-time equivalent (FTE) do you currently work in the following settings? If "Other", please specify in the space provided.

Clinic __%
Community centre __%

Private practice	__%
Preschool	__%
School (elementary, middle school, high school)	__%
College or University	__%
Hospital	__%
Rehabilitation centre	__%
_____	__%

Q9. List all languages you speak from most proficient (#1) to least proficient and rate your proficiency in each. (*Drop-down menu for proficiency rating - Excellent, Very good, Good, Fair, Poor, Very poor*)

	Language, please specify	Reading proficiency	Writing proficiency	Speaking fluency	Listening ability
1					
2					
3					
4					
5					

Q10. If you indicated that you speak more than one language, where did you *first* learn your second language?

__ At home
__ At school
__ In a country where that language is spoken
__ N/A

(*If "N/A", participants skip Q11 and Q12*)

Q11. At what age did you begin to use your second language in each of the following contexts? Leave blank if not applicable.

At home	__ years
At school	__ years
In a country where that language is spoken	__ years

Q12. How did you learn your second language? (*Only one answer possible*)

__ From formal classroom instruction
__ Mostly formal classroom instruction but some interaction as well
__ Equally both
__ Mostly interaction with people, but some formal classroom instruction as well
__ From interacting with people

Q13. Over the past 12 months, estimate the number of your clients who were:

Children ___
Adults ___

Q14. Over the past 12 months, estimate the number of your clients with the following as their *primary* disorder. If 'Other', please specify in the space provided.

Articulation/phonology ___
Language ___
Motor speech ___
Dysphagia ___
Voice/resonance ___
Fluency ___
_____ ___

Q15. Over the past 12 months, estimate the number of your clients who were:

Monolingual English speakers ___
Monolingual French speakers ___
Monolingual in another language ___
Speakers of a non-standard English dialect ___
Speakers of a non-standard French dialect ___

Individuals who learned their first language from birth and then learned a second language after 3 years of age. ___
Individuals who learned two languages at the same time, beginning before 3 years of age. ___

Q16. Do you offer any of the following services in your clinical practice? Check all that apply.

__ ESL services
__ FSL services
__ Accent reduction services
__ None of the above

Q17. Over the past 12 months, how many First Nations/Aboriginal clients were on your caseload?

___

Q18. How many different languages are represented on your current caseload?

___

Q19. Name the languages most commonly spoken by clients on your current caseload (maximum of 5).

Language, please specify	Number of clients on your current caseload speaking that language

Q20. Which strategy do you typically employ when working with linguistically diverse clients?
Linguistically diverse clients are clients who are bilingual, or non-standard dialect users, or monolingual in a language that you do not speak.

__ I assess/treat only in the languages I speak
__ I assess/treat in the client's strongest language
__ I assess/treat in all the languages that the client speaks
__ I do not work with linguistically diverse clients

(If "I do not work with linguistically diverse clients", participants skip Q21-Q25)

Q21. Please specify the frequency that you use the following supports or resources in working with linguistically diverse clients. If you do not have access to a given support or resource, select "N/A". If "Other supports/resources are used, please specify and rate frequency in the space provided.

	Always	Frequently	Infrequently	Never	N/A
Interpreters					
Bilingual SLPs					
Assessment tools in the client's language(s)					
Speech and language norms in the client's language(s)					
Cultural knowledge					
Training to work with linguistically diverse clients					

Q22. What supports or resources do you find particularly useful in working with a linguistically diverse client population and why?

_____
_____
_____

Q23. How often do you use the following assessment strategies when identifying communication disorders in linguistically diverse clients?

	Always	Frequently	Infrequently	Never	N/A
Standardized tests in English					

Standardized tests in French					
Standardized tests in the client's strongest language					
Standardized tests translated into the client's strongest language					
Standardized tests adapted for a particular client					
Naturalistic observations					
Language samples					
Dynamic assessments					

Q24. Please rate the barriers that you currently face when assessing and treating linguistically diverse clients.

	Very frequent	Somewhat frequent	Frequent	Somewhat infrequent	Very infrequent
Lack of appropriate less biased assessment instruments					
Don't speak the language of the client being assessed					
Lack of knowledge about the client's culture					
Lack of knowledge about bilingualism or bilingual development					
Lack of knowledge about second language acquisition					
Lack of availability of other speech-language pathologists who speak the client's language(s)					
Difficulty distinguishing a language difference from a language disorder					
Lack of availability of interpreters who speak the client's language(s)					
Lack of knowledge of developmental norms in the client's language					
Lack of time to administer appropriate					

assessment.					

Q25. Do you have any suggestions about how any of these barriers could be overcome? Please describe briefly.

Q26. Any other comments?

Appendix C

Languages Spoken by Respondents

Language spoken by respondents	# respondents
English	383
French	285
Spanish	61
German	27
Italian	15
American Sign Language (ASL)	9
langue des signes québécoise (LSQ)	8
Arabic	5
Hebrew	5
Dutch	4
Japanese	4
Mandarin	4
Cantonese	3
Russian	3
Bambara	2
Polish	2
Romanian	2
Attikamekw	1
Chinese	1
Cree	1

Language spoken by respondents	# respondents
Danish	1
Estonian	1
Farsi	1
Gujerati	1
Malyalam	1
Nonverbal	1
Ojibway	1
Portuguese	1
Serbian	1
Signed Exact English (SEE)	1
Tagalog	1
Ukrainian	1

Appendix D

Languages Represented on Caseloads

Language represented on caseloads	# reporting
English	268
French	190
Spanish	97
Arabic	63
Urdu	41
Mandarin	35
Punjabi	34
Cantonese	33
Italian	33
Portuguese	27
Tagalog	27
Chinese n.o.s	25
German	22
Russian	22
Tamil	21
Hindi	20
Cree	19
Polish	16
Farsi	14
Vietnamese	14

Language represented on caseloads	# reporting
Greek	13
Bengali	10
Korean	10
Creole	8
Gujarati	7
Inuktitut	7
Filipino	6
Hebrew	6
Low German	6
Turkish	6
langue des signes québécoise (LSQ)	5
Ojibway	5
Somali	5
African dialects	4
Dutch	4
First Nations Languages	4
Romanian	4
Swahili	4
Afrikaans	3
Dari	3
Dogrib	3

Language represented on caseloads	# reporting
Mi'qmac	3
Ojicree	3
American Sign Language (ASL)	2
Blackfoot	2
Croatian	2
First Nations English	2
Hungarian	2
Japanese	2
Malay	2
Mohawk	2
Pashtu	2
Serbian	2
Serbo-Croatian	2
Slavey	2
Ukrainian	2
Ahnishnabemowin	1
Amerindian	1
Amharic	1
Armenian	1
Assyrian	1
Attikamekw	1
Austrian	1

Language represented on caseloads	# reporting
Berbere	1
Bosnian	1
Bulgarian	1
Chipewyan	1
Dene	1
Dene/Chipewyan	1
F-E bilinguals	1
Finnish	1
Hakka	1
Ilocano	1
Kabyle	1
Karen	1
Kinyarwanda	1
Lebanese	1
Macedonian	1
Maltese	1
Montagnais	1
Ojibway/Odawa	1
Persian	1
Saulteaux	1
Sinhalese	1
Stoney	1

Language represented on caseloads	# reporting
Swedish	1
Telugu	1
Twee	1
Walloon	1