Survey of Canadian Speech-Language Pathology Service Delivery to Linguistically Diverse Clients

Sondage sur la Prestation de Services en Orthophonie au Canada à des Clients Locuteurs de Diverses Langues

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Abstract

An online survey of speech-language pathologists (S-LPs) in Canada was conducted to determine the state of S-LP service delivery to linguistically diverse clients. Data from 384 respondents from across Canada were analyzed. Results indicated that a majority of S-LP respondents provide services to linguistically diverse clients; however, more than half provide services only in the language(s) they, the clinicians, speak. Several barriers to service delivery were identified as pervasive including not speaking the language(s) of their client; limited access to clinicians who did speak their client's language(s), and limited access to several key supports and resources for overcoming some of these barriers such as interpreters or assessment tools in the client's language(s). Clinicians who spoke two or more languages reported assessing and treating clients in all the clients' languages more often than did monolingual English clinicians. As well, more monolingual English respondents than speakers of two or more languages reported that not speaking the clients' language(s), not having access to interpreters, and a lack of knowledge about second language acquisition were barriers to appropriately assessing and treating linguistically diverse clients. Comparisons to data from surveys conducted in the United States (U.S.) found few differences between findings in the U.S. and findings in Canada except that a higher percentage of Canadian S-LPs reported using dynamic assessment, naturalistic observations, and language sampling. Results from this study emphasize the need to increase the number of bilingual S-LPs in Canada and to increase S-LP access to supports and resources relevant to a linguistically diverse clientele.

Abrégé

Nous avons effectué un sondage en ligne auprès d'orthophonistes du Canada afin de déterminer l'ampleur de la prestation de services en orthophonie à des clients locuteurs de langues diverses. Nous avons analysé les données fournies par 384 répondants provenant de partout au Canada. Les résultats indiquent que la majorité des orthophonistes ayant répondu offrent des services à des clients parlant diverses langues; toutefois, plus de la moitié n'offrent des services que dans la langue qu'ils (les cliniciens) parlent. Plusieurs obstacles entravant la prestation de services ont été notés comme étant significatifs, y compris ne pas parler la langue de leurs clients; un accès limité à des cliniciens parlant la langue du client, et un accès limité à plusieurs appuis clés et ressources pour surmonter certains de ces obstacles, par exemple des interprètes ou des outils d'évaluation dans la langue du client. Les cliniciens parlant deux langues ou plus ont indiqué qu'ils évaluaient et traitaient toutes les langues des clients plus souvent que les cliniciens parlant seulement l'anglais. De plus, un plus grand nombre de répondants unilingues anglais que de répondants locuteurs de deux langues ou plus ont indiqué que de ne pas parler la langue des clients, de ne pas avoir accès à des interprètes et d'avoir un manque de connaissances concernant l'acquisition d'une langue seconde constituaient des obstacles entravant leur capacité d'évaluer et de traiter de façon appropriée leurs clients locuteurs de langues diverses. Une comparaison de données recueillies lors de sondages menés aux États-Unis a révélé peu de différence entre les résultats aux États-Unis et ceux au Canada, sauf qu'un plus grand pourcentage d'orthophonistes canadiens ont indiqué utiliser l'évaluation dynamique, l'observation naturaliste et les échantillons de langage. Les résultats de cette étude mettent en lumière le besoin d'accroître le nombre d'orthophonistes bilingues au Canada et d'améliorer l'accès des orthophonistes aux appuis et aux ressources pertinents pour travailler auprès d'une population avec une grande diversité linguistique.

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In 1971, Canada adopted multiculturalism as its official policy (Citizenship and Immigration Canada, 2008), reflecting Canadians' belief that Canada must support and promote citizens of all racial and ethnic origins. Diversity across the country is rapidly growing (Statistics Canada, 2006). While diversity should be celebrated, ensuring that all individuals in a diverse population have equal access and equal quality of service is a formidable challenge. It is critical that speech-language pathologists (S-LPs), the professionals responsible for treating individuals with communication disorders, accurately assess and appropriately treat linguistically and culturally diverse clients in order to meet the needs of all clients, regardless of their language or cultural backgrounds. In this study, we analyzed the challenges S-LPs in Canada encounter when assessing and treating culturally and linguistically diverse clients and how clinicians overcome those challenges. By culturally and linguistically diverse we mean those who are bilingual, non-standard dialect users, or monolingual in a language that the clinician does not speak. We hope that the information we provide in this paper will help to guide future policy and practices for this important population.

Appropriate assessment and treatment of culturally and linguistically diverse clients in speech-language pathology is difficult and requires considerable knowledge and skill which can challenge even the most seasoned clinician. For example, one key assessment goal is to distinguish between a *communication difference and a communication disorder* (Battle, 2002; Crago & Westernoff, 1997; Payne & Taylor, 2007). If this distinction is not made accurately then diagnoses and treatment decisions will not be based on accurate information. As well, research suggests that clinicians should assess and treat bilingual clients in both the language(s) the client uses (e.g., Kayser, 2003; Roberts, 2002; Westernoff, 1994). However, a lack of appropriate assessment instruments often makes it difficult to complete assessments in languages other than English (Centeno, 2009; Kohnert, Kennedy, Glaze, Kan, & Carney, 2003; Kritikos, 2003; Roseberry-McKibbin, Brice & O'Handlon, 2005). Indeed, the number of clinical resources available in English is far greater than the number available in other languages (Huang, Hopkins, & Nippold, 1997; Langdon & Wiig, 2009; Spinelli, 2008; Terrell & Terrell, 1983). Even when the language of a test is appropriate, the normative sample may not include individuals who match the client with respect to dialect and culture, rendering interpretation of results questionable (Garcia & Desrochers, 1997; Taylor, 1986; Thordardottir, 2006). For example, English standardized tests of speech and language are often developed in the U.S. and rarely include Canadians, bilinguals, or individuals from other language and cultural groups (Adler, 1990,

1991; Juárez, 1983; Westernoff, 1991) in their normative samples. Consequently, even bilinguals who are typically developing and have equivalent skills in both their languages may perform below monolingual norms on a standardized test and be identified as impaired (Genesee, Paradis, & Crago, 2004).

Alternatives to Standardized Tests

Given the problems associated with standardized testing of linguistically diverse individuals, several alternatives have been suggested. Caesar and Kohler (2007) have advocated for a descriptive approach involving the use of language sampling, interviews, direct observations, and rating scales. Gutiérrez-Clellen and 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, and 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 has also been shown to be useful (Langdon, 2008; Roseberry-McKibbin, 1994). In addition, Roseberry-McKibbin stressed the importance of assessing communication in both functional and natural contexts. In all such cases, interpretation depends on knowledge of developmental norms that are often not available. Nevertheless, in working with linguistically diverse clients, when valid standardized tools are not available, alternatives include non-standardised, naturalistic and dynamic assessment.

Another difficulty encountered when assessing culturally or linguistically diverse clients is that clinicians may not speak the language(s) of the client. Of course, a first alternative in addressing this issue would be referral to another clinician who does speak the language of the client, but this might not always be possible. In circumstances where it is not, the use of interpreters or translators has been recommended (e.g., American Speech-Language-Hearing Association (ASHA), 1985, 2004; Kambanaros & van Steenbrugge, 2004; Westernoff, 1991). Kambanaros and van Steenbrugge have advised S-LPs to ensure that the interpreter is well trained and knowledgeable about the typical responses and behaviours that are expected. The interpreter should also be trained in the importance of the evidence in the diagnosis of a communication disorder or they may adversely influence the assessment and intervention process (Kambanaros & van Steenbrugge, 2004). Clearly there might be challenges in adhering to these recommendations.

Surveys of S-LP Practice with Culturally or Linguistically Diverse Clients

Several survey studies have been conducted in the U.S. to investigate S-LP service delivery to culturally and linguistically diverse clients (Caesar & Kohler, 2007; Centeno, 2009; Kritikos, 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005). Across studies, the percentage of clinicians 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% (Caesar & Kohler, 2007) to 55% (Kritikos, 2003). As well, there was a mismatch between the most commonly reported languages spoken by clinicians and those spoken by their clients. 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). This mismatch suggests that S-LPs in the U.S., as a group, are not as linguistically diverse as the clients they serve, nor do they speak the languages most commonly represented on their caseloads.

Across the U.S. studies, barriers were identified to providing appropriate services to linguistically diverse clients and these were quite similar. The most frequently encountered problems for clinicians were: a) lack of knowledge of the client's language, b) lack of assessment and treatment instruments in languages other than English, c) lack of developmental norms in other languages, and d) lack of availability of other professionals (including S-LPs) with knowledge of the client's language (Centeno, 2009; Kohnert et al., 2003; Kritikos, 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005). The barriers to service delivery in the U.S. reported in these surveys did not change considerably over the 15-year span within which these studies were published.

With respect to assessment practices with linguistically diverse clients, instead of assessing in both client languages, a large proportion of U.S. clinicians reported assessing bilingual language learners solely in English (Caesar & Kohler, 2007). In addition, contrary to ASHA (2004) guidelines, many S-LPs reported using English standardized tests (Caesar & Kohler, 2007; Centeno, 2009) more often than alternative, informal procedures. While language sampling was used by 33% (Caesar & Kohler, 2007) to 39% (Centeno, 2009) of respondents, and 33% collected a language acquisition history (Centeno, 2009), no respondents reported using dynamic assessment (Caesar & Kohler, 2007). A large proportion of

respondents in various surveys reported employing the services of an interpreter in assessing and treating linguistically diverse clients (Caesar & Kohler, 2007; Centeno, 2009; Kostich & Weiss, 2007; Roseberry-McKibbin & Eicholtz, 1994). While the use of interpreters therefore appears to be a common strategy when working with linguistically diverse clients, interpreter availability varies depending on language, and the incorporation of interpreters into the clinical process requires additional time on the part of the clinician (Kostich & Weiss, 2007). Of concern was that 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 and 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. In summary, it would appear that clinicians in the U.S. are still struggling to implement recommended practices for working with a linguistically diverse population.

The Canadian Context

The Canadian context differs in many ways from that of the U.S. Canada has two official languages, English and French, but it is also home to 6.1 million individuals who speak neither English nor French as a first language (Statistics Canada, 2006). Both English and French are official languages in New Brunswick and the three territories. Nunavut also officially recognizes the Inuit Language, the North West Territories officially recognizes nine other languages in addition to English and French, while Quebec is the only province in Canada where the French-speaking population outnumbers the English-speaking population (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 U.S. The 700,000 Aboriginal people in Canada speak more than 50 different indigenous languages as well as varieties of English and French that are influenced by these languages (Ball & Bernhardt, 2008). As well, French immersion programs are available to children throughout Canada and have been in existence for over 30 years to encourage French-English bilingualism.

Within Canada, there is a recognized shortage of appropriate French assessment tools (Boudreault, Cabirol, Poulin-Dubois, Sutton, & Trudeau, 2007; Garcia & Desrochers, 1997). Outside of Quebec and New Brunswick, French-speakers seeking speech-language pathology services may share the same problems as speakers of any non-official language due to a shortage of French-speaking clinicians. For example, they risk being

incorrectly diagnosed by a clinician who does not speak French or does not have an awareness of the cultural and linguistic differences associated with the language (Garcia & Desrochers, 1997). As well, the validity of available French tests, for use with both monolingual and bilingual speakers of French in Canada, has been questioned (Thordardottir et al., 2011).

Given the particulars of the Canadian context, we might wonder what barriers there are to S-LPs' provision of services to linguistically diverse clients in Canada. While we might look to findings from the U.S. (Caesar & Kohler, 2003; Centeno, 2009; Kritikos, 2003; Kohnert, et al., 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005) as a starting point, the uniqueness of the Canadian context encourages us to look specifically to research conducted here in Canada. To date, only two studies have surveyed S-LPs' provision of services to linguistically diverse clients in Canada (Ball & Lewis, 2011; Kerr, Guildford, & Kay-Raining Bird, 2003). Kerr et al. surveyed standardized test usage of 144 Canadian Association of Speech-Language Pathologists and Audiologists (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% interpreted the tests using 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 S-LPs in Canada as well as those in the U.S. Of the 70 clinicians surveyed by Ball & Lewis (2011), 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. These two studies provide us with a preliminary status of barriers to S-LP service to linguistically diverse clients, but, given the studies' focus on standardized testing and people of Aboriginal descent respectively, we clearly need a more comprehensive survey.

The purpose of the study reported here, then, was to expand our understanding of the challenges faced by S-LPs across Canada working with linguistically diverse clients of all ages. We used a survey instrument to do so. Specifically, we sought to: a) assess the current status of speech-language pathology services to linguistically diverse clients in Canada in the language(s) they speak; b) examine the barriers that S-LPs face in providing such services; c) determine the manners in which these barriers are overcome; and d) investigate the relationships between the clinicians' language use and variables such as caseload composition, rating of barriers faced, and availability and use of supports/resources.

METHOD

Participants and Recruitment

The 384 participants in this study were practicing S-LPs across Canada with current caseloads who completed an online survey accessed through Opinio, a survey system supported by Dalhousie University, where the research was conducted. The national association, CASLPA, 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) made the link to the survey available to participants. This link was made available in one or more of the following ways: a direct email to all S-LP members with details of the study and a web link to the survey; inclusion of the web link within a monthly email to S-LP members; or inclusion of the web link on the members-only section of the association's website. A reminder notice was sent two months after first contact via the same routes to increase response rates.

The survey was made available in French or English and was open for responses for 10 weeks. A total of 394 surveys were completed. (The survey was accessed 668 times reflecting the fact that many clinicians did not complete the survey when first accessing it). Of the surveys completed, 10 did not meet the eligibility requirements – the respondents were not practicing S-LPs 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. According to the Canadian Institute for Health Information (CIHI, 2007), there are 6,661 S-LPs in Canada. However, it is not possible to determine the number of S-LPs who actually saw the notices regarding the survey distributed by the national and/or provincial associations and/or regulating bodies. Consequently, a response rate cannot be calculated.

Survey Design

A 26-item survey questionnaire was developed (see Appendix A). To establish validity of the instrument, the questionnaire was pilot-tested with one experienced speech-language pathologist in each of the following provinces/territories: Nova Scotia, New Brunswick, Quebec, Ontario, British Columbia, and Northwest Territories. 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 final form in response to this feedback and the original pilot participants were asked to review the changes to ensure that their concerns were addressed.

Similar to the surveys administered by Caesar and Kohler (2007), Kohnert et al. (2003), Kritikos (2003), and Roseberry-McKibbin et al. (2005), questions about demographic information (#2-12), caseloads (#13-19), barriers (#24) to offering speech-language pathology services to linguistically diverse individuals, and supports/resources available to overcome those barriers (#21-22) were included.

Demographic items. Participants were asked to specify their years of experience in the field, and the location and setting of practice. They were also asked to report the languages they spoke, and to rate their proficiency in each language on a Likert-like scale (*excellent; very good; good; fair; poor, very poor*).

Caseloads. Respondents were asked to indicate their caseload size, the most frequent five languages represented on their caseloads, the number of clients speaking each language, and the types of disorders represented on their caseload. Clinicians were also asked about their current clinical experience and practice with linguistically diverse individuals (Caesar & Kohler, 2007; Kohnert et al., 2003; Kritikos, 2003; Roseberry-McKibbin et al., 2005).

Barriers. Respondents were asked to rate the frequency with which they encountered potential barriers to providing services to linguistically diverse clients on a Likert-like scale (*very frequent; frequent; somewhat frequent; somewhat infrequent; infrequent*). Potential barriers and rating scales were adapted from the surveys conducted by Kohnert et al. (2003), Kritikos (2003), and Roseberry-McKibbin et al. (2005)

Supports/Resources. Clinicians were also asked about their access to and use of six supports/resources identified in the literature as key to overcoming some of the barriers associated with service delivery to linguistically diverse clients (e.g., Crago & Westernoff, 1997; Hoff, 2005; Nicoladis & Genesee, 1997; Payne & Taylor, 2007; Westernoff, 1991).

Analysis

The data were downloaded from Opinio into the Statistical Package for the Social Sciences (SPSS; v.17 for Windows) for analysis. The number and percentage of individuals responding to each question or selecting an option for each question were tallied. Chi-square tests were used to compare the percentage of participants responding to various questions or to a known distribution; significance was set at $p < .05$ a priori.

RESULTS

Demographics

Geographic area. 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 S-LPs in provinces across the country (CIHI, 2007), $\chi 2 (9, n = 379) = 108.6, p > .05$. The provinces of Alberta, British Columbia, and Manitoba were significantly under-represented, and New Brunswick, Nova Scotia, and Prince Edward Island were significantly over-represented. No comparison data were available on the number of S-LPs in the territories.

Linguistic background. There were 32 languages reported spoken by participants, 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 respondents (21.9%) 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. Three hundred respondents (78.1%) listed knowledge of two or more languages; 188 were reportedly bilingual, 112 multilingual; 285 reported knowledge of both French and English. Of the 293 who indicated where they had learned their second language, 50 (17.1%) indicated that they learned it at home, 208 (71.0%) 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 S-LP experience 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 sample, 374 (97.4%) respondents had a Masters degree in speech-language pathology; 286 (76.5%) completed their program in English, 86 (23.0%) in French, and one each in Portuguese and Romanian. In addition, two of the respondents with a master's degree also reported holding a doctoral degree in speech-language pathology.

Work. Respondents were asked to report both the total percentage of a Full Time Equivalent (FTE) they worked and the percentage of the total work time that they spent in a variety of work settings (e.g., school,

clinic, etc.; see Appendix A, question 8). Most (283, 74.0%) reported that they worked full time (i.e., 1 FTE; range = 10-102%, M = 91.8%, SD = 17%). Many (145, 37.8%) also indicated that they worked in more than one setting. The largest percentage of respondents reported working in the schools (154, 40.1%), although clinics, hospitals or rehabilitation centres were also frequently identified as work settings and all options provided in this question were represented. Respondents were asked specifically whether they provided English as a Second Language (ESL), French as a Second Language (FSL) or Accent Reduction (AR) services in their clinical practice. Only a small number did (38, 9.9%; 26, 6.8%; and 13, 3.4% respectively).

Caseloads

Several questions regarding caseload make-up (#13-15), required respondents to indicate the 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 reported. As a result, the decision was made to analyze the number of respondents who indicated

working with a particular category of client rather than the number of clients reported in each category.

Respondents reported on the linguistic make-up of their caseloads (Table 1). In terms of the languages of the clients, overall, monolingual English clients were represented on 84.4% of all caseloads, while monolingual French clients and clients who were monolingual in another language were present on 38.3% and 35.7% of caseloads, respectively (Table 1). In terms of the language of the respondents, chi-square revealed that a larger proportion of monolingual English respondents reported having monolingual English clients on their caseloads than did respondents with knowledge of two or more languages, $\chi2$ (1, n = 384) = 19.1, p < .001. In contrast, a greater proportion of respondents with knowledge of two or more languages reported having monolingual French clients, $\chi2$ (1, n = 384) = 44.1, p < .001, clients with non-standard French dialects, $\chi2$ (1, n = 384) = 6.5, p = .011, sequential bilinguals, $\chi2$ (1, n = 384) = 9.4, p = .002, and simultaneous bilinguals, $\chi2$ (1, n = 384) = 12.5, p < .001 on their caseloads. Considering the age range of the caseloads, there were 235 (61.2%) respondents with exclusively pediatric caseloads; 45 (11.7%) with only adult caseloads; and 104 (27.1%) with mixed pediatric-adult caseloads.

Table 1
Number and Percentage of Respondents who Reported Having Various Clients on their Caseload

Clients	Total (n = 384) #	Total (n = 384) %	Monolingual English (n = 84) #	Monolingual English (n = 84) %	Two or more languages (n = 300) #	Two or more languages (n = 300) %
Monolingual English speakers	324	84.4%	84	100%	240	80.0%
Monolingual French speakers	147	38.3%	6	7.1%	141	47.0%*
Monolingual in another language	137	35.7%	29	34.5%	108	36.0%
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	0.0%	22	7.3%*
Sequential bilinguals	263	68.5%	46	54.8%	217	72.3%*
Simultaneous bilinguals	254	66.1%	42	50.0	212	70.7%*

Notes: Sequential bilinguals = learned a first language from birth and a second language after 3 years of age; Simultaneous bilinguals = learned two languages at the same time, beginning before 3 years of age; * = Chi-square indicates percentage of monolingual and multilingual respondents significantly different at p< .05

The number of languages reported spoken by clients on any single respondent's 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 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).

Chi-square revealed that a larger proportion of respondents who spoke two or more languages reported assessing and treating in all the languages spoken by the client, $\chi2$ (1, n = 384) = 7.24, p = .007. Conversely, a larger proportion of monolingual English respondents reported assessing and treating only in the language they themselves spoke, $\chi2$ (1, n = 384) = 4.93, p = .026.

In examining S-LPs' practices with linguistically diverse clients, only responses from the 344 respondents who reported that they did work with linguistically diverse clients were analysed. There were 40 respondents who indicated that they did not work with linguistically diverse clients. Of the 344 respondents who reported working with linguistically diverse clients, 82 (23.8%) indicated that they assessed and treated linguistically diverse clients in all the languages spoken by the client; 70 (20.3%) indicated that they assessed and treated in the client's strongest language; and 192 (55.8%) indicated that they assessed and treated only in the languages they, the clinician, spoke.

Barriers

The 344 respondents who worked with linguistically diverse clients were asked to rate the frequency with which they encountered certain barriers in assessing and treating linguistically diverse clients. Table 2 shows the number of respondents who indicated encountering a given barrier *very frequently, somewhat frequently,* or *frequently*, both for the overall sample and for those who were monolingual English or had knowledge of two languages. Overall, the three barriers rated by the largest number of respondents as frequently to very frequently encountered were a *lack of appropriate less biased assessment instruments* (276, 80.2%), *a lack of availability of other S-LPs who speak the client's language(s)* (251, 73.0%) and *don't speak the language of the client being assessed* (248, 72.1%). This pattern was also seen when examining the responses of clinicians with knowledge of two or more languages. However, the pattern of responses differed for monolingual English respondents. Not surprisingly, the barrier rated by the largest number of monolingual English respondents as frequently to very frequently encountered was: *don't speak the language of the client being assessed* (60, 80.3%). Chi-square comparisons identified significant differences in the proportion of monolingual English respondents and respondents with two or more languages reporting frequently to very frequently encountering three of the listed barriers: *Don't speak the language of the client being assessed,* $\chi2$ (1, n = 344) = 5.72, p = .016; *Lack of availability of interpreters who speak the client's language,* $\chi2$ (1, n = 344) = 5.21, p = .022; and *lack of knowledge about second language acquisition,* $\chi2$ (1, n = 344) = 4.45, p = .034. In all cases, a larger proportion of monolingual English respondents than speakers of two or more languages reported frequently facing each of these three problems.

Table 2

Number and Percentage of Respondents Working with Linguistically Diverse Clients who Reported Facing Barriers Very Frequently, Frequently, or Somewhat Frequently in Serving Linguistically Diverse Clients

| | Respondents | | | | | |
	Total (n = 344)		Monolingual English (n =72)		Two or more languages (n = 272)	
Barriers	#	%	#	%	#	%
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	73.0%	58	80.6%	193	71.0%

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	68.0%	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	50.0%	96	35.3%*
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	25.0%*

Note: Sequential bilinguals = learned a first language from birth and a second language after 3 years of age; Simultaneous bilinguals = learned two languages at the same time, beginning before 3 years of age; * = Chi-square indicates percentage of monolingual and multilingual respondents significantly different at p< .05

Supports/Resources

Respondents who reported working with linguistically diverse clients were asked to identify whether they had access to various supports or resources. About a quarter (24.7 to 27%) of all respondents reported having *no access* to four of the six supports/resources: bilingual S-LPs; 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), $\chi2$ $(1, n = 344) = 7.63, p = .005$ and no access to speech and language norms in the client's language(s), $\chi2$ $(1, n = 344) = 5.05, p = .024$ than did respondents with knowledge of two or more languages (Table 3).

Table 3

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

	Respondents					
	Total (*n* = 344)		Monolingual English (*n* =72)		Two or more languages (*n* = 272)	
Supports/Resources	**#**	**%**	**#**	**%**	**#**	**%**
Interpreters	53	15.4%	14	19.4%	39	14.3%
Bilingual S-LPs	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%

Notes: * = Chi-square indicates percentage of monolingual and multilingual respondents significantly different at p< .05

When clinicians had access to listed resources, they were asked to rate the frequency (*always, frequently, infrequently, never*) with which they used them when working with linguistically diverse clients. Cultural data, interpreters, and training were most 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 S-LPs, $\chi2$ (1, $n = 344$) = 11.65, $p < .001$; assessment tools in the client's language(s), $\chi2$ (1, $n = 344$) = 10.16, $p = .001$; speech and language norms in the client's language(s) $\chi2$ (1, $n = 344$) = 7.74, $p = .005$; and training to work with linguistically diverse clients, $\chi2$ (1, $n = 344$) = 4.2, $p = .040$ (Table 4).

Table 4

Number and Percentage of Respondents who Reported having Both Access to Various Resources/Supports and Using them "Always" or "Frequently"

	Respondents					
	Total ($n = 344$)		Monolingual English ($n = 872$)		Two or more languages ($n = 272$)	
Supports/Resources	#	%	#	%	#	%
Interpreters	123/291	42.3%	22/58	40.0%	101/233	43.3%
Bilingual S-LPs	64/259	24.7%	3/50	6.0%	61/209	29.2%*
Assessment tools in the client's language(s)	66/254	26.0%	3/44	6.8%	63/210	30.0%*
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	75.0%	49/69	71.0%	191/251	76.1%
Training to work with linguistically diverse clients	111/262	42.4%	17/56	30.4%	94/206	45.6%*

Notes: Percentages are based on total number responding to the item (n) minus respondents reporting no access to the support/resource; * = Chi-square indicates percentage of monolingual and multilingual respondents significantly different at p< .05

Assessment Strategies

Respondents were asked to rate their frequency of use of various assessment strategies when working with linguistically diverse clients, using the same rating scale as described for use of supports (see Table 5). 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, $\chi2$ (1, n = 344) = 23.68, p < .001; standardized tests in the client's strongest language, $\chi2$ (1, n = 344) = 12.88, p < .001; and standardized tests translated into the client's strongest language, $\chi2$ (1, n = 344) = 126.47, p < .001. In all three cases, significantly fewer monolingual English respondents reported using these tests than respondents with two or more languages.

Table 5

Number and Percentage of Respondents who Reported Always or Frequently Using a Particular Assessment Strategy with Linguistically Diverse Clients

	Respondents					
	Total (n = 344)		Monolingual English (n = 72)		Two or more languages (n = 272)	
Assessment Strategy	#	%	#	%	#	%
Standardized tests in English	226	65.7%	48	66.7%	178	65.4%
Standardized tests in French	71	20.6%	0	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	86.0%
Dynamic assessments	247	71.8%	50	69.4%	197	72.4%

Notes: * = Chi-square indicates percentage of monolingual and multilingual respondents significantly different at p< .05

DISCUSSION

The purpose of this study was to examine the current state of services provided by S-LPs in Canada in serving linguistically diverse clients, the challenges they face and the manner in which those challenges are overcome. Data from 384 respondents were analyzed. The S-LPs who responded to this survey reported working with a variety of linguistically diverse clients, including monolingual speakers of French or another language other than English, bilinguals, and speakers of nonstandard dialects. Together, S-LPs reported speaking 32 different languages with some proficiency, with one clinician reporting proficiency in five languages. An even wider variety of languages (87) were reported spoken by their clients, with individual clinicians reporting up to 40 different languages being spoken by clients on their caseloads. Thus, while the group of clinicians in this sample had a considerable degree of language capacity, ultimately, there was a mismatch between the languages they spoke and those spoken by their clients.

A mismatch between clinician and client languages, of course, presents challenges to assessment and intervention that must be overcome if linguistically diverse clients are to receive services. First, clinicians are encouraged in the literature to assess and treat bilingual clients in both their language(s) (e.g., Kayser, 2002; Roberts, 2002; Westernoff, 1994). These services can be made available directly or with assistance from trained interpreters. Of the 344 clinicians who reported providing services to linguistically diverse clients, about a quarter reported they assessed and treated all of the client's language(s)[1]. Without assessing each language a client uses, it is impossible to get an accurate sense of their language abilities. That being said, the feasibility or even advisability of treating all languages in multilingual clients has not been adequately addressed in the literature and should be studied. Further, our understanding of how treatment in one language affects learning in other languages (i.e., positive transfer) is limited and needs further study. More than half of the respondents in the present study reported assessing and treating *only* in the languages that they themselves spoke, which is contrary to best practice. This suggests that speech-language pathology services in the client's language(s) are not available to many linguistically diverse clients. 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 S-LPs or interpreters. Other data from this survey support this notion. For example, in the

present study, 72% of clinicians with linguistically diverse clients on their caseloads reported 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 suggests that, when a professional does not speak a client's language, referral to a clinician who does speak the language is appropriate (Crago & Westernoff, 1997). It would appear that most clinicians in this study were aware that this would be a preferred choice, but did not have that option. The need for recruiting more S-LPs who speak languages other than English is highlighted with these findings.

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), including French (Garcia & Desrochers, 1997). Therefore, it is not surprising that the barrier reported by the largest percentage of respondents who had linguistically diverse clients on their caseloads was a lack of availability of appropriate less-biased assessment instruments. This absence or lack 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 unnecessarily placed on caseloads (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 linguistically diverse clients.

In addition to assessment tools, clinicians who reported providing services to linguistically diverse clients also reported an absence of necessary developmental information that can be used to interpret language sample data and to plan for intervention with linguistically diverse clients. Almost 25% of these clinicians reported that they did not have access to speech and language norms in the client's language(s) and 68% reported that the lack of knowledge of developmental information is a barrier to service delivery. The clinicians in this study see a critical need for both of these resources.

Resources and supports key to addressing some of the difficulties associated with providing appropriate service delivery to linguistically diverse clients have been identified in the literature (e.g., Hoff, 2005; Juárez, 1983; Kambanaros & van Steenbrugge, 2004) and by ASHA (2003, 2004, 2005) and CASLPA (Crago & Westernoff, 1997). In particular, working with well-

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1   Note that respondents were asked to indicate if they did the following: "I assess/treat in all the languages that the client speaks."

trained interpreters is a vital alternative for clinicians given that many S-LPs do not speak the languages spoken by their clients (Crago et al., 1991; Kambanaros & van Steenbrugge, 2004; Westernoff, 1991). While almost 85% of respondents with linguistically diverse clients on their caseloads 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). Successful incorporation of interpreters into the clinical process is dependent upon the clinician ensuring that the interpreter has: a) native proficiency in the client's language(s); b) knowledge of professional terminology, assessment and treatment principles; and c) basic interview skills (ASHA, 2004). Clinicians may not have the time or opportunity to train an interpreter and may therefore not feel they are helpful. Other reasons for not using professional interpreters may be an inability to cover the financial costs associated with their use or the lack of availability of a professional interpreter for the particular client language. In the absence of a professional interpreter, a clinician may use a client's family member or other staff members as an alternative during assessment and treatment. However, this is not necessarily ideal (Kambanaros & van Steenbrugge, 2004), as information can be unknowingly altered or omitted by such interpreters, particularly in the case of family members, even after training. Given the documented usefulness of interpreters in working with linguistically diverse clients and the fact that they are not available to all clinicians who need them, greater access to interpreters and training in their appropriate use is warranted.

Knowledge about a client's culture can be an excellent resource for clinicians. Almost all clinicians reported having access to cultural information, and of these, approximately 75% reported using this information *always* or *frequently*. In contrast, approximately 75% also reported that they had *no access* to training to work with linguistically diverse clients. Thus, while it seems that clinicians are able to obtain some background cultural knowledge to assist them in working with many clients, continuing education opportunities do not appear to be easily available. This would suggest that new avenues for obtaining this knowledge need to be developed.

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 to any assessment, and are particularly important in the absence of valid standardized tools (e.g., ASHA, 2003; Gutiérrez-Clellen & Simon-Cereijido, 2009; Peña, Iglesias, & Lidz, 2001). Clearly, a large majority of respondents to this survey were aware of the importance of these less formal assessment procedures. The information gathered through such procedures would be more adequately interpreted if the S-LP could make comparisons to speech and language developmental information specific to a client's language. However, as stated previously, these norms are often not available.

Contrasting Monolingual and Multilingual Clinicians

As a group, clinicians who were monolingual English speakers differed from those who spoke two or more languages in their responses to the survey questions. First, fewer monolingual English speaking clinicians reported having clients who were monolinguals in a language other than English, non-standard French dialect speakers or bilinguals on their caseloads. It is possible that monolingual English clinicians may work more often in communities with high numbers of monolingual English speakers, and therefore they may not encounter as many linguistically diverse clients.

In terms of service provision, relative to monolingual English respondents, a significantly larger proportion of clinicians who spoke two or more languages reported assessing and treating clients in all the languages spoken by the client. Conversely, a significantly larger proportion of monolingual English respondents reported assessing and treating clients only in the language they themselves spoke. Several factors may account for these findings. First, since they do not speak another language, monolingual English clinicians may be more likely to refer linguistically diverse clients to other clinicians who do, rather than treat the client themselves. However, since monolingual English S-LPs report referring to bilingual S-LPs less often than clinicians who speak two or more languages even though both groups of respondents report equivalent access to bilingual clinicians, this is not a likely explanation. Alternatively, monolingual English speaking S-LPs may have less access to other supports/resources needed to provide appropriate services in all the client's language(s). This appears to be a more likely explanation as monolingual English speaking clinicians reported they have no access to assessment tools in the client's language or speech and language norms in the client's language more often than did clinicians who speak two or more languages. It is also possible that, because of their own monolingual backgrounds, monolingual English clinicians may be less 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 such as not having assessment tools or

developmental information in the client's language, 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 may lack the knowledge, skills and/or resources required to do so appropriately. Indeed, if there are fewer linguistically diverse clients in a catchment area, there would likely be fewer resources to assess and treat them at the facility where the S-LP works.

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 S-LPs, 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 best be attributed to the accessibility issues just discussed. It is also possible that clinicians who are bilingual can use their own personal knowledge of the impact of linguistic diversity to assist them in making appropriate decisions about speech and language assessment and treatment.

There was no difference between monolingual English speaking clinicians and clinicians who know two or more languages in their access to or use of interpreters—approximately 85% of both groups reported having access to interpreters although only about 40% in each group reported using them frequently or very frequently. Clearly, knowledge of two or more languages does not guarantee that a clinician will know the client's particular language(s). Since S-LPs who know two or more languages report serving linguistically diverse clients more often, then the need for interpreters in this group is higher.

Comparisons to Previous Surveys

Several similar surveys have been conducted in the U.S. as far back as 1994 (Centeno, 2009; Kohnert et al., 2003; Kritikos, 2003; Roseberry-McKibbin & Eicholtz, 1994; Roseberry-McKibbin et al., 2005). Only two such studies have been conducted in Canada, excluding this one. Both Canadian studies (Kerr et al. 2003; Ball & Lewis, 2011) were narrower in scope than the present study and surveyed S-LPs' provision of services to linguistically diverse pediatric clients only. Results from the present study expand on our understanding of the Canadian context and indicate that the challenges surrounding service delivery to linguistically diverse clients are not limited to the pediatric population and are similar in many ways in Canada and the U.S.

Comparing service availability between the two countries, we see a similar mismatch between the languages spoken by clinicians and those spoken by clients. Similar to findings in the survey conducted by Kritikos (2003), in the present study the most commonly reported languages spoken by clinicians and those spoken by their clients differed. After English and French, the five most common languages spoken by clinicians in the present study were Spanish, German, Italian, ASL, and LSQ (Quebec Sign Language). In contrast, the five most common languages represented on caseloads, after English and French, were Spanish, Arabic, Urdu, Mandarin, and Punjabi. This suggests that, despite the linguistic diversity of clinicians both in Canada and the U.S., the types of languages spoken are not the same as those most represented on caseloads. The problem is most obvious when the number of clinicians reporting that they are able to speak a particular language is contrasted with the number of clinicians reporting they have clients who speak that language: Arabic 5 versus 65, Urdu 0 versus 41, Mandarin 4 versus 35 and Punjabi 0 versus 34 respectively. Clearly it is critical to recruit more clinicians who speak those languages most often encountered on caseloads such as Arabic, Urdu, Mandarin and Punjabi. Interestingly, in the present study more Canadian clinicians reported speaking French (285) than having clients who spoke French (190) which suggests that many French-speaking clients in Canada are indeed being serviced in French, although even in this case not all clinicians who reported have French-speaking clients also reported speaking the language.

With respect to the barriers faced in providing appropriate services to linguistically diverse clients, the pattern of responses in the present study is in accordance with the findings of U.S. studies (Kohnert et al., 2003; Kritikos, 2003; Roseberry-McKibbin et al., 2005). Similar differences in the pattern of responses produced by monolingual English respondents and respondents with knowledge of two or more languages was noted by Kritikos (2003), with the most frequently reported barrier to service delivery for monolingual clinicians being a lack of knowledge of the client's language(s).

Assessment strategies used by clinicians appear to differ in Canada and the U.S. Caesar and Kohler (2007) reported lower use of informal methods to assess bilingual students' language abilities compared to the present study. Only 33% of U.S. S-LPs reported using language sampling and 10% reported engaging in naturalistic observations, while dynamic assessment was not used (Caesar & Kohler, 2007). In contrast, approximately 90% of clinicians in the present study reported using naturalistic observations, 85% reported taking language samples, and 70% reported using dynamic assessments. This suggests that Canadian clinicians may be more knowledgeable about and comfortable with the use of alternative assessment methods than their U.S. counterparts.

Limitations and Future Research

Response rate could not be accurately calculated because of the nature of participant recruitment. The survey was made available to potential participants through website postings and emails to membership lists, depending upon the organization that assisted in the recruitment. It is impossible to determine how many S-LPs actually saw the invitation to participate. Despite this, since there are 6,661 S-LPs in Canada (CIHI, 2007) and 384 surveys were completed, this suggests that the sample size for this survey is relatively small compared to the population of clinicians in Canada. Nonetheless, all regions of Canada were represented in the sample and the more populated provinces had larger numbers of survey respondents suggesting that the sample was representative of the general geographic distribution of S-LPs across the country (CIHI, 2007). In addition, 84 monolingual English speakers and 300 speakers of two or more languages participated, allowing us to compare the responses of these two groups. Both of these groups of respondents were also geographically distributed across provinces and territories in a manner that is reflective of the linguistic make-up of the general population in each province territory (i.e., no monolingual English respondents from Quebec). Another factor increasing the representativeness of the sample was that approximately half of all respondents had less than 10 years of experience and half had 10 or more years of experience, a distribution that emerged within each province and territory. These demographic attributes suggest that results from this survey may be generalized to the larger population of S-LPs across Canada, 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.

Conclusions and Recommendations

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 suggest many of the challenges recognized then remain 15 years later. As well, despite the contextual differences, the challenges that clinicians experience appear to be similar in the U.S. and Canada with respect to service delivery to linguistically diverse clients.

In general, it appears that Canadian clinicians responding to this survey were aware of the complexities involved in providing appropriate services to linguistically diverse clients. They are currently often using resources, supports, and strategies recommended for appropriate service delivery. Data from the current study, however, suggest that clinicians may benefit from continuing education in a variety of topics. More education should 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 such training. As it is unlikely 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 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 S-LPs in general is one strategy that will be helpful, especially since these clinicians seem to be more likely to use recommended strategies for assessment and intervention. It would also be useful, however, to target specific languages when recruiting bilingual S-LPs. In particular, there appears to be a critical need to recruit clinicians who speak Chinese dialects, Urdu, Arabic and Punjabi to university training programs and clinical positions in Canada. Being bilingual does not guarantee that the clinician will speak the language(s) of the client. Consequently, 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.

The need for the development of assessment tools for linguistically diverse clients in the Canadian context is warranted, despite the use of alternative assessment strategies such as language sampling, dynamic assessment, and naturalistic observations. Without such standardised tools, the quality of service delivery to linguistically diverse clients is compromised. Similarly, there is a critical need for developmental information and speech and language norms for the wide variety of languages represented on clinicians' caseloads. 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). Interpreters should have not only 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 work towards alleviating the financial costs associated with using interpreters.

The role of an S-LP is to support speech, language, and

communication in their clients. Therefore, it is essential that S-LPs find ways to ensure that the diversity of clients does not prevent access to quality service delivery. This study indicates that accurate assessment and appropriate treatment of linguistically diverse clients remains a challenge. It is a challenge that S-LPs must meet.

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APPENDIX A

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

___ Ph.D.

(*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?

_____(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 S-LPs					
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?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____