ABSTRACT: Purpose: This investigation surveyed program directors of speech-language pathology graduate programs in the United States to determine their views on the academic instruction and clinical practicum experiences that are provided to prepare students to work with culturally and linguistically diverse populations.
Method: An online survey was administered to program directors of accredited programs in speech-language pathology throughout the United States.
Results: Overall, program directors felt that their programs prepared students to provide speech-language pathology services to culturally and linguistically diverse populations. Two survey questions yielded statistically significant differences across geographic regions of the United States. The first related to the amount of academic instruction provided in cultural and language diversity (CLD), and the second to the adequacy of numbers of individuals from culturally and linguistically diverse backgrounds to participate in clinic practica. Responses to an open-ended question also suggested that some directors perceived challenges related to providing sufficient practicum experience for working with culturally and linguistically diverse populations due to a lack of access to such individuals. There were no statistically significant differences across regions for questions related to the importance of meeting the revised American Speech-Language-Hearing Association standards regarding CLD, or questions related to the extent of challenges associated with those standards.
Conclusion: Results suggest that program directors perceived that their graduate programs in speech-language pathology were addressing issues of CLD through the provision of at least some academic and clinical training for their students. Continued attention to evaluation of program efforts in training for CLD is warranted to improve the quality of opportunities for all graduate students in speech-language pathology to receive training that promotes at least entry-level cultural competence.

KEY WORDS: cultural, diversity, linguistic, preservice, speech-language pathology

Although the expanding diversity in the United States results in the increased likelihood that speech-language pathologists (SLPs) will serve culturally and linguistically diverse clients in their careers, there are many challenges to providing high-quality, culturally competent clinical services (Battle, 2001; Kohnert, Kennedy, Glaze, Kan, & Carney, 2003). Cultural competence for SLPs has been characterized as “sensitivity to cultural and linguistic differences that affect the identification, assessment, treatment and management of communication disorders” (Battle, 2001; Kohnert, Kennedy, Glaze, Kan, & Carney, 2003). This study surveyed program directors of speech-language pathology graduate programs in the United States to determine their views on the academic instruction and clinical practicum experiences that are provided to prepare students to work with culturally and linguistically diverse populations.
Academic Training of SLPs to Serve Diverse Clients

Several studies suggest that improvements have occurred in preservice training in speech-language pathology related to CLD over approximately a 10-year period. For example, Roseberry-McKibbin et al. (2005) compared a survey completed in 1990 (Roseberry-McKibbin & Eicholtz, 1994) to one completed in 2001 (Acevedo, 2001) regarding the amount of course work in bilingual services that SLPs who were employed in public schools had received. This comparison revealed that the percentage of SLPs who had received academic instruction regarding the provision of services to bilingual children increased from 23.6% in 1990 to 73% in 2001. During this time frame, course work in cultural diversity was required by fewer than one third of accredited graduate programs in speech-language pathology in the United States (Nigam, Lloyd, & Haynes, 2000, as cited in Kohnert et al., 2003). This difference may indicate that, although not required, graduate students in speech-language pathology were choosing to take academic course work related to CLD. This is further illustrated in a 2004 survey of SLPs in public schools in which approximately 52% of respondents reported having some sort of academic training in CLD as undergraduate or graduate students, whereas 34% reported no course work, and 14% could not recall (Hammer, Detwiler, Detwiler, Blood, & Qualls, 2004). Further, for those who reported having course work in CLD, 18% to 25% indicated that they only received from one to several lectures in a course. Hammer et al. noted the apparent improvement in preservice provision of content relevant to CLD over a 9-year period of comparison but concluded that additional efforts were needed in the amount and scope of preservice training experiences in CLD. Kohnert et al. (2003) found that only 47% of school-based SLPs surveyed in Minnesota reported that they had received preprofessional training specifically focused on issues of CLD. Furthermore, only approximately 25% of the respondents reported that this training had been included as a part of their graduate school instruction (Kohnert et al., 2003).

These investigations have relied on SLPs’ reports of academic preparation they received over varying periods of time and in various programs. Another perspective on preservice preparation of SLPs to provide services to individuals from culturally and linguistically diverse backgrounds can be gained through information provided by speech-language pathology academic programs regarding the current academic preparation that is provided to their students. Although there are limited studies that examine such perceptions, Stewart and Gonzalez (2002) investigated speech-language pathology program directors’ perceptions and attitudes about training students in speech-language pathology to serve culturally and linguistically diverse populations. Respondents noted their belief that students were prepared in only two of fifteen areas of academic preparation for CLD. Those areas were differentiating between communication disabilities and differences, and providing appropriate intervention strategies for elective treatment chosen by clients from diverse backgrounds without disorders. Responses were judged as neutral for the other 13 statements on their survey related to the adequacy of preparation of speech-language pathology graduate students to provide culturally competent services. The authors concluded that academic programs in speech-language pathology were attempting to provide academic instruction related to diversity issues, but that much room for improvement existed (Stewart & Gonzalez, 2002).

Finally, there is reason to believe that differences in the method of delivery of instruction in CLD may influence SLPs’ perceptions of their ability to serve such populations. For example, Roseberry-McKibbin et al. (2005) found that school-based SLPs who had not taken a full course on bilingualism reported more challenges in working with linguistically diverse students than did those professionals who had taken a full course training them to serve bilingual clients. There are important implications of this research, as “this pattern suggests that having taken a course in service delivery to bilingual students may help alleviate the perception of the frequency of problems, or it may possibly help reduce the occurrences of these problems” (Roseberry-McKibbin et al., 2005, p. 54).

Although the aforementioned study, for example, found that a full course in bilingualism was perceived as more beneficial in addressing the preparation of SLPs to provide services to bilingual individuals, Stewart and Gonzalez (2002) and Hammer et al. (2004) found that most graduate programs provided students with training in issues of diversity by infusion across courses. Although an infusion model of instruction in CLD may be effective, the potential exists for variability and greater challenges in tracking student acquisition of CLD competencies. Stewart and Gonzalez reported that programs most often provided instruction in multicultural topics by infusion across courses, and cautioned that “although the infusion of content across courses is a preferred strategy and can be highly effective in ensuring that students understand that diversity issues permeate all aspects of the profession, this model can result in failure to address important content, uneven content coverage, and fragmentation of content unless it is well coordinated” (p. 211). Thus, the method of...
delivery of CLD content may influence the extent to which SLPs graduate prepared to provide CLD services.

Clinical Preprofessional Training of SLPs to Serve Diverse Clients

Laing and Kamhi (2003) suggested that “culturally sensitive clinicians have an awareness of different cultures as well as specific experiences interacting with individuals from different cultures” (p. 44). Stewart and Gonzalez (2002) concluded that one of the greatest challenges facing graduate preparation programs was the provision of clinical education with diverse populations for all students. Several authors have suggested that differences in practicum opportunities may be associated with the geographic area in which they were located (Hammer et al., 2004; Roseberry-McKibben et al., 2005; Stewart & Gonzalez, 2002). Although SLPs may be aware of the importance of providing culturally sensitive services to diverse clients, without specific supervised practica, SLPs may lack adequate preparation for entry-level competence.

Professional Standards for Preparation to Serve Individuals From Culturally and Linguistically Diverse Backgrounds

The ASHA Council on Academic Accreditation (CAA) has established standards that are intended to ensure that SLPs are prepared to serve multicultural populations. These standards relate directly to the issues of this investigation. In particular, accredited programs are required to meet all relevant standards to achieve and maintain program accreditation, and must provide training to assist students in speech-language pathology to meet competencies required for professional certification as an SLP. ASHA first recommended that speech-language pathology and audiology programs educate students on topics related to multiculturalism in 1985 (Stockman, Boult, & Robinson, 2004). In 1994, ASHA-accredited programs were required to address issues of multiculturalism through their academic content (Stockman et al., 2004). It was not until 2005, however, that programs were also required to provide students with supervised practicum experiences with multicultural populations.

On January 1, 2005, revised standards for the Certificate of Clinical Competence in Speech-Language Pathology became effective. Of these, Standard IV-F specifically states that supervised practicum must include experience with clients from culturally and linguistically diverse backgrounds (ASHA, 2005a, “Program of Study-Skills Outcome” section, para. 15). This was a revision to previous standards, which did not require clinic practicum experience with diverse clients. Although ASHA has demonstrated the importance of cultural competence through increased standards for graduate programs, data are lacking to evaluate the attitudes of academic programs regarding these newer standards. It is reasonable to speculate that there may be differences based on region of the United States where programs are located, in that students in programs throughout the United States may not have equal opportunities to work with culturally and linguistically diverse clients (Hammer et al., 2004; Roseberry-McKibben et al., 2005; Stewart & Gonzalez, 2002). For example, although the population defined as minority is almost 40% in the Western region of the United States, it is only 16% in the Midwest region (New Strategist Editors, 2000, p. 655).

Research is needed to determine if there are differences across the United States in how effectively speech-language pathology graduate programs are preparing students to serve culturally and linguistically diverse clients. This view may yield important insights that can assist programs in training speech-language pathology students to meet the needs of culturally and linguistically diverse populations.

In summary, it is important to examine the current state of preprofessional preparation for SLPs in order to determine what, if any, changes are needed related to competence in serving individuals from culturally and linguistically diverse backgrounds (Hammer et al., 2004). Recent changes in standards for program accreditation and clinical certification make it important to investigate how programs are currently providing academic and clinical preparation in CLD, and to what extent the perceptions of these training programs differ across the United States. This investigation used a survey methodology to gather information from program directors of accredited programs in speech-language pathology within the United States to address this issue.

Research Questions

The primary research questions guiding this study were:

• How do program directors in different regions of the United States perceive their speech-language pathology graduate programs’ academic preparation for students to serve diverse populations in future employment settings?
• How do program directors in different regions of the United States perceive their speech-language pathology graduate programs’ clinical practicum preparation for students to serve diverse populations in future employment settings?
• What are characteristics of program directors’ perceptions of the ASHA certification and CAA standards related to CLD?

METHOD

Participants

In an effort to obtain the greatest number of participants, all ASHA-accredited speech-language pathology graduate programs in the continental United States were contacted through e-mail upon approval for the project from the Institutional Review Board at the College of Wooster. A total of 235 program directors of speech-language pathology graduate programs across the country were sent an
e-mail. This e-mail informed program directors of the purpose of the study and invited them to participate.

**Survey Instrument**

In order to gather the desired information, a survey was conducted using the SurveyMonkey.com Internet-based survey program. The 25-question survey was designed by the investigators for the purposes of this study. Appendix A provides a copy of the survey. The survey was designed to measure program directors’ perceptions related to their preparation of speech-language pathology graduate students to serve culturally and linguistically diverse clients. Questions were based on a literature review of this topic between the period of 1990 to 2005, resulting in some self-designed questions of interest to the purpose of this study and some questions that were adapted for use based on other survey studies in CLD and speech-language pathology. Respondents were asked to consider the training of all graduate students who were currently enrolled in their program.

The first portion of the survey asked participants to identify the state in which their program was located and to indicate what terms they most associated with the word “culture” as it relates to cultural diversity. Further survey content items used 5-point ordinal scales to report opinions related to extent of agreement. For these items, a rating of 1 indicated strongly disagree, 2 indicated somewhat disagree, 3 indicated neutral, 4 indicated somewhat agree, and 5 indicated strongly agree. Additional questions used a 7-point discrete ordered category scale for questions that involved estimates of amount or extent. Finally, three questions on the survey provided a list of choices for which participants could indicate multiple responses, and a final open-ended question provided the opportunity for respondents to add comments regarding perceived challenges related to practicum training in CLD.

**Procedure**

The continental United States was grouped into six geographic regions based on groupings that were identified in a 2005 paper by Roseberry-McKibbin et al. (p. 51). These regions are detailed in Table 1. For the purposes of this study, data were not collected from Hawaii or Alaska, as ASHA did not list any speech-language pathology graduate programs in Alaska, and only one program was listed in Hawaii.

Speech-language pathology graduate programs in each region were identified using ASHA’s online guide to graduate programs. The e-mail addresses of the program directors for each graduate education program in speech-language pathology were then obtained through the programs’ Web sites. An e-mail explaining the purpose of the study and requesting participation was sent to program directors of each graduate education program in speech-language pathology in December 2005. The e-mail also included a link to the online survey.

All participants were asked to complete the survey within 30 days. A subsequent e-mail was sent to program directors approximately 1 month after the initial e-mail, thanking them for their participation in the study and indicating for those who had not yet completed the survey that the survey would be available for an additional week beyond the 30-day period. Data were collected and tabulated automatically by the Survey Monkey Web service, then exported directly to SPSS (SPSS Inc., 2002) for descriptive and inferential statistical analysis. Visual examination and Kolmogorov-Smirnov testing of responses from this survey suggested that data were not normally distributed. Therefore, nonparametric analyses were conducted for the survey questions using SPSS 11 for Macintosh. The primary statistical analyses conducted were Kruskall-Wallis (nonparametric test similar to ANOVA) and Spearman’s rank order correlations. All analyses were done using the SPSS program with data directly exported from the online survey.

**RESULTS**

**Response Rate**

A total of 235 program directors of speech-language pathology graduate programs in the continental United States participated in this survey.
States were sent an e-mail, and 121 completed surveys. The overall return rate for program directors, therefore, was 51%. Of these 121 surveys, 113 were completed entirely and were used in data analysis. This resulted in a final usable survey return rate of 48% (n = 113).

Demographics

All six regions of the United States (Roseberry-McKibbin et al., 2005) were represented by the program directors who participated in this study. Of the 113 fully completed surveys, there were responses from 36 states. Geographic regions represented were as follows: 6 respondents from the Western region (5.3%), 19 from the Southwestern region (16.8%), 22 from the Midwestern region (19.5%), 40 from the Mid-Atlantic region (35.4%), 6 from the New England region (5.3%), and 20 from the Southern region (17.7%).

Definition of Culture

Program directors were asked to select the words and phrases that represented what they most commonly thought of when considering the term “culture” as it related to the purpose of this study. Respondents were permitted to select more than one term from a closed list or to add their own terms. Choices provided were compiled from an extensive literature review that was conducted for the period between 1990 and 2005. The term ethnicity was the most common response; 94.7% of the program directors (n = 107) selected this term. Additionally, 85% of the program directors (n = 96) selected the term language. A third frequent response for a definition of culture was the term race; 77.9% of the program directors (n = 88) made this selection. See Table 2 for a summary of the terms that were identified to define culture.

The terms that program directors commonly use to define culture can provide insight concerning which individuals these respondents consider to represent culturally diverse clients. The most common terms selected were ethnicity, language, and race. Throughout this study, therefore, when considering students’ clinical experience with “culturally diverse clients,” participants in this survey were likely referring to clients whose ethnicity, language, and race differ from what is considered “mainstream” in the United States. The term mainstream typically refers to “white, Christian, middle to professional class, educated monolingual speakers of General American English” (Kohnert et al., 2003, p. 259).

Research Question One

This component of the investigation addressed respondents’ perceptions of their speech-language pathology graduate programs’ academic preparation for students to serve culturally and linguistically diverse populations.

Amount of academic instruction in CLD. Program directors responded to a survey question regarding how much academic instruction related to CLD their students receive while enrolled in their graduate program. There was a 7-point scale for this question, with 1 corresponding to none and 7 corresponding to a lot. Of the 113 responses to this question, 100% of the program directors indicated that their students had received at least some academic training related to CLD. Refer to Table 3 for distribution of the responses to this question.

The median score for program directors (n = 113) regarding the amount of academic instruction in issues of diversity provided to students was 5.00 (SD = 1.42) on the 7-point scale. Responses of program directors for this survey question were examined and grouped according to region of the continental United States to investigate whether the perceptions of respondents differed by geographic region. This comparison across regions revealed a statistically significant difference based on a Kruskal-Wallis test, 2(5, N = 113) = 12.103, p < .05.

Academic preparation specific to the assessment of culturally and linguistically diverse clients. The survey addressed participants’ perceptions of students’ preparation to assess diverse clients based on their academic coursework. The 7-point scale, with 1 representing not at all prepared and 7 representing extremely prepared, was used to evaluate participants’ responses. Respondents reported a median score of 5.00 (SD = 1.32). Differences between regions were not statistically significant.

Table 2. Number and percentage of responses for terms used to define “culture.”

<table>
<thead>
<tr>
<th>Term</th>
<th>Responses</th>
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<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Race</td>
<td>88</td>
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<tr>
<td>Ethnicity</td>
<td>107</td>
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<tr>
<td>Language</td>
<td>96</td>
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<tr>
<td>Socioeconomic status</td>
<td>57</td>
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<tr>
<td>Religion</td>
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<tr>
<td>Country of origin</td>
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<tr>
<td>Geographic location of residence</td>
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</tr>
<tr>
<td>Sexuality</td>
<td>41</td>
</tr>
<tr>
<td>Ancestry</td>
<td>56</td>
</tr>
<tr>
<td>Dialect</td>
<td>65</td>
</tr>
<tr>
<td>Hearing vs. culturally Deaf</td>
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</tr>
<tr>
<td>Other</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 3. Distribution of responses for the amount of academic instruction in cultural and linguistic diversity received by students in the various programs.

<table>
<thead>
<tr>
<th>Rating</th>
<th>% of responses</th>
</tr>
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<tbody>
<tr>
<td>1 (none)</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>3</td>
<td>11.5</td>
</tr>
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<tr>
<td>5</td>
<td>22.1</td>
</tr>
<tr>
<td>6</td>
<td>24.8</td>
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<tr>
<td>7 (a lot)</td>
<td>11.5</td>
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Academic preparation specific to intervention for diverse clients. Program directors were asked about their perceptions of their programs’ academic preparation to implement intervention programs for culturally and linguistically diverse clients. The 7-point scale was used to evaluate participants’ responses (1 = not at all prepared and 7 = extremely prepared). The question asked if, based on academic course work, students were prepared to implement intervention programs for culturally and linguistically diverse clients during clinical practicum. Program directors indicated a median response of 5.00 (SD = 1.32) for this item.

There was no statistically significant difference among respondents in different regions regarding how prepared they perceived students to be to implement intervention programs for culturally and linguistically diverse clients. This suggests that students in different regions are perceived by program directors as equally prepared to implement intervention programs for diverse clients.

Methods of instructional delivery in CLD. Program directors most commonly reported that their graduate programs addressed issues of diversity through integration in other courses. Directors could select more than one response to this question, so response totals sum to more than the number of respondents. There were 102 responses (59.4%) reporting integrating diversity issues into other courses in the program, 45 (25.4%) reporting use of a required course, and 12 (7.6%) reporting use of an elective course, through special conferences or invited speakers, or in a required undergraduate class.

CLD topics addressed within speech-language pathology graduate school curricula. Of the program directors who participated in this study, 89.4% (n = 101) reported that students enrolled in their graduate programs had course work in the assessment of culturally and linguistically diverse clients. Additionally, 86.7% (n = 98) reported that students in their graduate programs studied intervention for diverse clients, 85% (n = 96) reported that students studied bilingualism or multilingualism, 83.2% (n = 94) reported that students studied cultural differences in beliefs about communication, 78.8% (n = 89) reported that students studied social dialects, and 75.2% (n = 85) reported that students studied second language acquisition. One program director (0.9%) selected the other response and indicated that students studied the use of interpreters. Finally, 3.5% of the program directors who participated in the study (n = 4) reported that they did not know what topics related to diversity that students enrolled in their graduate programs studied.

Research Question Two

The following results address the perceptions of program directors of their speech-language pathology graduate programs’ clinical practicum preparation for students to serve diverse populations in future employment settings.

Amount of clinical practicum in CLD. The discrete ordered category scale ranging from 1 to 7, with 1 being none and 7 being a lot, was used to measure program directors’ perceptions regarding the amount of clinical practicum experience that students in their programs have with diverse clients. There were no responses indicating that graduate students did not receive practicum with clients from culturally and linguistically diverse backgrounds (a response of 1). Refer to Table 4 for the distribution of responses to this question.

A Kruskal-Wallis analysis was conducted in order to compare the perceptions of program directors in each region of the United States regarding the amount of clinical practicum experience with diverse clients that their students receive. The median response to this item was 5.00 (SD = 1.42). This comparison did not reveal a statistically significant difference across regions, 2(5, N = 113) = 9.31, p > .05.

Practicum preparation specific to the assessment of culturally and linguistically diverse clients. The survey addressed participants’ perceptions of students’ preparation to assess diverse clients based on their practicum training. The 7-point discrete ordered category scale, with 1 representing not at all prepared and 7 representing extremely prepared, was used to evaluate participants’ responses. Respondents reported a median score of 5 (SD = 1.32). Differences between regions were not statistically significant.

Practicum preparation specific to intervention for diverse clients. Program directors were asked about their perceptions of their program’s practicum preparation to implement intervention programs for culturally and linguistically diverse clients. The 7-point scale was used to evaluate participants’ responses (1 = not at all prepared and 7 = extremely prepared). The question asked if, based on clinical practicum, students were prepared to implement intervention programs for culturally and linguistically diverse clients when they entered employment. Program directors indicated a median response of 5.00 (SD = 1.32) for this item.

Importance of clinical practicum experience with diverse clients. Program directors were asked to use a 5-point ordinal scale (1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, and 5 = strongly agree) to indicate their level of agreement with two statements regarding the importance of clinical practicum experience with diverse clients. First, respondents

<table>
<thead>
<tr>
<th>Rating</th>
<th>% of responses</th>
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<tbody>
<tr>
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<tr>
<td>2</td>
<td>4.4</td>
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<tr>
<td>3</td>
<td>23.0</td>
</tr>
<tr>
<td>4</td>
<td>16.8</td>
</tr>
<tr>
<td>5</td>
<td>29.3</td>
</tr>
<tr>
<td>6</td>
<td>14.2</td>
</tr>
<tr>
<td>7 (a lot)</td>
<td>12.4</td>
</tr>
</tbody>
</table>

Table 4. Distribution of responses for the amount of clinical practicum students received in CLD.
replied to the statement, “It is more important for speech-language pathologists in large cities to have clinical practicum experience with culturally and linguistically diverse clients than it is for clinicians in rural areas.” The median score on this question for program directors was 2.00 (SD = 1.30). There was no statistically significant difference across regions.

Program directors used the same 5-point scale to indicate their level of agreement with the statement, “It is more important for speech-language pathologists in certain employment settings to have clinical practicum experience with culturally and linguistically diverse clients than it is for clinicians in other employment settings.” Program directors’ responses to this question yielded a median score of 2.00 (SD = 1.24). As with the previous item, there was not a statistically significant difference across regions.

Program directors’ perceptions of student practicum experiences. Program directors were asked to indicate their level of agreement with the statement, “There is a sufficient number of culturally and linguistically diverse clients who participate in clinical practicum through your graduate program.” A 5-point ordinal scale was used to measure participants’ level of agreement with this statement. Overall, respondents indicated a median response of 4 (SD = 1.18). A Kruskal-Wallis test indicated a statistically significant difference in response to this question, 2(5, N = 113) = 6.897, p < .05.

External practicum sites with diverse populations. Program directors were asked, “In your graduate program, how much clinical experience do graduate students have that involves external rotation sites with culturally and linguistically diverse populations?” Respondents used the 7-point scale (1 = none and 7 = a lot) to respond to this question. Overall, program directors indicated a median score of 5.00 (SD = 1.71). A Kruskal-Wallis test was conducted in order to compare the median responses of program directors in different regions. This comparison indicated that there was not a statistically significant difference among regions, 2(5, N = 113) = 6.897, p > .05.

Student collaboration with diverse families. Program directors were asked to use the 7-point scale (1 = none and 7 = a lot) to indicate how much clinical experience graduate students enrolled in their graduate programs receive that includes opportunities to interact with the family members of diverse clients. Overall, program directors reported a median score of 5.00 (SD = 1.50). According to a Kruskal-Wallis test, there was not a statistically significant difference across program directors in different regions regarding reported amounts of students’ collaboration with families from diverse cultural and linguistic backgrounds, 2(5, N = 113) = 6.98, p > .05.

Relationships between speech-language pathology preparation and number of culturally and linguistically diverse individuals available for practicum. Rank order correlations were computed to determine potential relationships across questions related to the program directors’ perceptions of student preparation and amount of culturally and linguistically diverse individuals available. Overall, responses indicated a statistically significant weak negative correlation (r = -.209, p < .05) between the amount of academic preparation in CLD reported and the adequacy of numbers of individuals from culturally and linguistically diverse backgrounds in the programs’ practicum settings. This finding suggests that there may be more academic training in programs where there is a perception that there are fewer than desired numbers of culturally and linguistically diverse individuals in their clinic. There were not statistically significant correlations between the amount of CLD practicum experiences offered and the perceived availability of culturally and linguistically diverse individuals in the clinic, or between the amount of CLD practicum and the geographic region for the program.

Research Question Three

A segment of the survey focused on program directors’ perceptions and opinions of the 2005 revisions to the ASHA and CAA standards related to CLD. These results are summarized below.

Perceptions of ASHA Standard IV-F. Four questions on the survey were specifically related to ASHA’s certification Standard IV-F, which states that “supervised practicum must include experience with client/patient populations across the life span and from culturally/linguistically diverse backgrounds” (ASHA, 2005a, “Program of Study_ Skills Outcome” section, para. 15). These items evaluated how participants perceived the importance of Standard IV-F, the effect of state demographics on programs’ abilities to meet this standard, and perceived student opportunities to meet this standard.

Importance of Standard IV-F. The first question asked participants to use a 5-point ordinal scale to indicate their level of agreement with the statement, “The importance of this standard is equal to that of all other ASHA standards.” The median score for this item was 4.00 (SD = .848). A Kruskal-Wallis analysis revealed no statistically significant difference across regions in ratings by program directors on this item, 2(5, N = 113) = 5.173, p > .05.

Effect of state demographics on programs’ ability to meet Standard IV-F. A second item on the survey related to Standard IV-F asked respondents to indicate their level of agreement with the statement, “The demographics of the state in which I am employed make it difficult for my graduate program to meet this standard.” Again, the 5-point ordinal scale was used to evaluate participants’ level of agreement with this statement. Overall responses yielded a median score of 2.00 (SD = 1.24). A Kruskal-Wallis analysis indicated that the difference across regions was not statistically significant, 2(5, N = 113) = 10.647, p > .05.

Student opportunities to meet Standard IV-F. Two statements were designed to measure the perceived opportunities that students have to meet ASHA Standard IV-F. One statement related to the ASHA standard requiring students to have practicum with diverse clients was, “Opportunities to meet this standard vary for graduate students enrolled in my graduate program.” Another statement was, “All graduate students enrolled in this graduate program have equal opportunities to meet this standard.” Responses to both statements were measured on the 5-point scale. The median score for respondents on the “opportunities vary”
item was 4.00 (SD = 1.23). A Kruskal-Wallis analysis did not reveal a statistically significant difference across regions, $2(5, N = 113) = 5.74, p > .05$. The median score for respondents on the “equal opportunities” item was 3.00 (SD = 1.19). There was not a statistically significant difference by region, $2(5, N = 113) = 2.89, p > .05$.

Perceptions of CAA program accreditation Standard 5.5.

Three items on the survey were related to CAA Standard 5.5 for the accreditation of graduate education programs. This standard states that “the program has access to a client base sufficiently large and diverse to achieve the program’s mission, goals, and objectives and to prepare students to meet ASHA-recognized national standards for entry into professional practice” (ASHA, 2005b, “Program Resources” section, para. 9). These three items evaluated the perceived importance of this accreditation standard, whether programs face challenges in meeting this standard, and the feasibility of meeting this standard in different regions. For all three items, participants used a 5-point ordinal scale to indicate their level of agreement with statements about this standard.

Importance of Accreditation Standard 5.5. Program directors were asked to indicate their level of agreement with the statement, “The importance of this accreditation standard is equal to that of all other standards for accreditation of graduate education program in speech-language pathology.” The median score for program directors was 4.00 (SD = .83). There was not a statistically significant difference across regions regarding the importance of CAA Standard 5.5, $2(5, N = 113) = 3.45, p > .05$.

Challenges in meeting Standard 5.5. Second, program directors responded to the statement, “My graduate program faces challenges in meeting this standard.” Respondents reported a median score of 2.00 (SD = 1.24). There was also not a statistically significant difference across region for this item, $2(5, N = 113) = 6.85, p > .05$. There was, however, a statistically significant correlation noted in respondents’ views of the extent of challenges in meeting this standard, and whether they perceived their geographic region to be culturally and linguistically diverse ($r = -.424, p < .001$). Similarly, there was a statistically significant correlation across all respondents between the perception of challenges meeting this standard and the number of culturally and linguistically diverse individuals in the programs’ practicum settings ($r = -.62, p < .01$). These findings are somewhat counter-intuitive and should receive further investigation.

Perceptions of the feasibility of meeting Standard 5.5.

Third, program directors responded to the statement, “It is more feasible for graduate programs in certain areas of the country to meet this standard” using the 5-point scale. Program directors indicated a median score of 4.00 (SD = 1.00). A Kruskal-Wallis analysis indicated no statistically significant difference on this item across regions, $2(5, N = 113) = 1.28, p > .05$.

Additional challenges in meeting ASHA and CAA standards on CLD.

The last item on the survey was an open-ended question asking participants to indicate any challenges that they felt their graduate program faced in helping students to meet the ASHA certification standard requiring clinical practicum experiences with clients from culturally and linguistically diverse backgrounds. This item was included to provide the opportunity for comment on preservice challenges related to practicum, as the requirement for practicum reflected the most recent revision of the 2005 ASHA certification standards. Forty-two different respondents provided 75 comments in response to this question.

A content analysis of the open-ended responses was conducted to determine thematic content and focus. The initial categorization was completed by the second author with the aid of the NVivo7 (QSR International, 2006) software program. The intrarater reliability for this coding was calculated for all of the open-ended comments and was found to be 100% in agreement with the initial coding. A doctoral-level speech-language pathology student conducted reliability coding on a randomly selected 25% of the comments in order to determine interrater reliability for the category assignments and frequency counts. Agreement for this coding was 97.3%. Twelve comments were excluded during discussions between the two coders due to unclear meaning, being nonresponsive to the question, or related reasons, which left 63 comments for further examination. Six themes accounted for those 63 comments that were made in response to this question. The greatest number of those comments (40%, or 25/63 comments) related to a lack of sufficient individuals from culturally and linguistically diverse backgrounds to allow quality clinical experiences to speech-language pathology students. The second highest number of comments related to training, representing 33% (21/63) of all comments. Student issues comprised 1% (6/63) of the comments, and three other themes made up the remainder of comments: lack of assessment tools and materials (.05%, or 3/63), lack of translators or interpreters (.06%, or 4/63), and lack of information (.05%, or 3/63). Appendix B provides the themes and comments to the practicum challenges perceived by program directors.

**DISCUSSION**

Limitations of Study

Survey methodology. Findings of this investigation should be interpreted with an understanding of some of the inherent limitations of survey methodology. Results reflect the perceptions of the respondents only and may not reflect those of all faculty or students in their respective programs. Additionally, the study did not use direct measures of program offerings and did not provide a longitudinal view of changes in academic preparation related to CLD. Finally, because responses were confidential, the authors had no way to verify that the surveys were actually completed by directors of the programs surveyed, or what programs actually returned surveys.

Representativeness of sample. Although responses were received from every region of the United States, with a good overall response rate for the survey, it should be noted that there were 12 states that were not represented in the sample. Of those, the Western region had six states not
represented, resulting in only two of eight states in that region for which surveys were completed. Of the remaining states not represented, three were in the Southern region, one was from New England, and three were from the Midwest. The Mid-Atlantic region had a larger than expected number of responses due to one state for which more surveys were returned than were sent out. The most likely explanation for this is that the e-mail link containing the survey was forwarded to other program faculty, who also completed surveys.

CONCLUSIONS

All respondents to this study reported that their graduate students in speech-language pathology received at least some academic training and practicum experiences related to issues of CLD. Furthermore, responses indicated that program directors viewed CLD as an important issue to consider in their programs, equal in importance with all other training areas specified in the ASHA and CAA standards.

Although respondents agreed overall that there were sufficient numbers of culturally and linguistically diverse individuals available for practicum experiences, the difference in responses to this item across regions was statistically significant. Despite this regionally based difference in perceptions of sufficient numbers of culturally and linguistically diverse individuals available for practicum, there were no statistically significant differences across regions in the perceptions of the amount of practicum experience students received, or their level of preparation to work with individuals from culturally and linguistically diverse backgrounds. It may be that respondents varied across regions in their views of what would constitute “sufficient” numbers of individuals from culturally and linguistically diverse backgrounds, or that additional efforts were being made to ensure that students had sufficient practicum experience despite perceived concerns related to the availability of culturally and linguistically diverse clients.

The concern related to perceived availability of culturally and linguistically diverse clients for practicum was the most frequently mentioned challenge in providing adequate practicum experiences in CLD on the open-ended survey question on this topic. Forty percent of the responses mentioned challenges related to a lack of individuals from culturally and linguistically diverse backgrounds to meet practicum needs. These findings suggest that programs may need to continue to develop effective strategies to assist students in meeting the practicum competencies for CLD, particularly where concerns exist related to the availability of culturally and linguistically diverse individuals for clinical practicum. These findings related to differences in the perceived availability of individuals from culturally and linguistically diverse backgrounds for clinical practicum experiences for students in their programs are consistent with the general data indicating variation in culturally and linguistically diverse individuals across these regions, and with previous studies addressing the issue of geographic differences in speech-language pathology preparation for CLD (Hammer et al., 2004; Roseberry-McKibbin et al., 2005; Stewart & Gonzalez, 2002).

Programs may also benefit from self-evaluation to ensure that their infusion efforts are coordinated and result in acquisition of the desired competencies related to CLD. The typical mode of delivery for culturally and linguistically diverse academic content in this study was reported to be infusion across courses, which is in agreement with the findings of Stewart and Gonzalez (2002). Their cautions bear consideration as programs evaluate the degree to which they are addressing ASHA and CAA standards and competencies related to CLD. In particular, these authors indicated that an infusion model can be effective but also can result in uneven content coverage and fragmentation of content unless the infusion efforts are well-coordinated (Stewart & Gonzalez, 2002, p. 211).

Although the results of this study indicate that speech-language pathology programs across the country reported that they provide students with at least some academic training and clinical experiences related to diversity, there were challenges reported. Programs should continue to strive to provide equivalent amounts of the highest quality of academic and clinical training in issues of CLD to students in all regions of the United States. Further research is needed addressing the effectiveness of the infusion model of instruction for CLD, student views on their preparation for culturally and linguistically diverse populations, and direct measures of culturally and linguistically diverse academic and clinical preparation.

REFERENCES


American Speech-Language-Hearing Association. (2004). Knowledge and skills needed by speech-language pathologists and audiologist to provide culturally and linguistically appropriate services. ASHA Supplement, 24, 152–158.


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APPENDIX A. SURVEY QUESTIONS

Program Director Opinions of Graduate Students’ Preparation for Culturally and Linguistically Diverse Populations

1. In what state is your graduate program located?

2. Consider the term “cultural diversity.” What do you most commonly think of when you think of “culture?” (Check all that apply.)
   - race
   - ethnicity
   - language
   - socioeconomic status
   - religion
   - country of origin
   - geographic location
   - sexuality
   - ancestry
   - dialect
   - hearing
   - other

3. How much academic instruction regarding cultural and linguistic diversity do graduate students enrolled in your program receive?
   (1 = None, 7 = A lot)

4. How much clinic practicum experience with culturally and linguistically diverse clients do graduate students enrolled in your program receive?
   (1 = None, 7 = A lot)

5. Based on their academic course work, do you think graduate students enrolled in your program are prepared to ASSESS culturally and linguistically diverse clients during clinic practicum?
   (1 = Not At All Prepared, 7 = Extremely Prepared)

6. Based on their academic course work, do you think graduate students enrolled in your program are prepared to IMPLEMENT INTERVENTION programs for culturally and linguistically diverse clients during clinic practicum?
   (1 = Not At All Prepared, 7 = Extremely Prepared)

7. Based on their clinic practicum experience, do you think graduate students enrolled in your program are prepared to ASSESS culturally and linguistically diverse clients in future employment settings?
   (1 = Not At All Prepared, 7 = Extremely Prepared)

8. Based on their clinic practicum experience, do you think graduate students enrolled in your program are prepared to IMPLEMENT INTERVENTION programs for culturally and linguistically diverse clients in future employment settings?
   (1 = Not At All Prepared, 7 = Extremely Prepared)

9. The area in which your graduate program is located is culturally and linguistically diverse.
   1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

10. There is a sufficient number of culturally and linguistically diverse clients who participate in clinic practicum through your graduate program.
    1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

11. It is more important for speech-language pathologists in large cities to have clinic practicum experience with culturally and linguistically diverse clients than it is for clinicians in rural areas.
    1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

12. It is more important for speech-language pathologists in certain employment settings to have clinic practicum experience with culturally and linguistically diverse clients than it is for clinicians in other employment settings.
    1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

13. The importance of this standard is equal to that of all other ASHA standards.
    1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

14. The demographics of the state in which I am employed make it difficult for my graduate program to meet this standard.
    1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

continued on next page
15. Opportunities to meet this standard vary for graduate students enrolled in my graduate program.
   1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

16. All graduate students enrolled in this graduate program have equal opportunities to meet this standard.
   1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

17. The importance of this accreditation standard is equal to that of all other standards for accreditation of
   graduate education programs in speech-language pathology.
   1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

18. My graduate program faces challenges in meeting this standard.
   1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

19. It is more feasible for graduate programs in certain areas of the country to meet this standard.
   1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree

20. In your graduate program, how much clinical experience do graduate students have in which they use
    an interpreter to communicate with clients?
    (1 = None, 7 = A Lot)

21. In your graduate program, how much clinical experience do graduate students have that involves
    external rotation sites with culturally and linguistically diverse populations?
    (1 = None, 7 = A Lot)

22. In your graduate program, how much clinical experience do graduate students have that includes
    opportunities to interact and work with family members of culturally and linguistically diverse clients?
    (1 = None, 7 = A Lot)

23. In academic course work within your graduate program, how are issues of cultural and linguistic
    diversity addressed? (Check all that apply.)
    __ Not at all      __ Required course focused on multicultural issues
    __ Elective course focused on multicultural issues   __ Integrated in other courses   __ I don’t know
    __ Other

24. In academic course work within your graduate program, which of the following topics do students
    study? (Check all that apply.)
    __ Bilingualism/multilingualism     __ Second language acquisition     __ Social dialects
    __ Assessment of CLD clients     __ Intervention for CLD clients
    __ Cultural beliefs about differences in communication     __ I don’t know     __ Other

25. Please list any challenges you feel your graduate program faces in allowing students to meet the
    ASHA standard requiring clinic practicum experiences with clients from culturally and linguistically
    diverse backgrounds.
### APPENDIX B. RESPONSES AND CATEGORIES FOR QUESTION 25

**Summary of Comment**

<table>
<thead>
<tr>
<th>Comment</th>
<th>Category/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. they can meet the standard but we need more translators to do the job well and more assessment tools for various languages as there are 58 primary languages in our local school district.</td>
<td>Translators &amp; Interpreters and Tools</td>
</tr>
<tr>
<td>2. we’re able to provide many opportunities with families whose L1 is Spanish, but not as much with other languages</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>3. *students can request their own practicum sites</td>
<td></td>
</tr>
<tr>
<td>4. the counties around are predominantly Caucasian</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>5. limited cultural diversity in the community</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>6. representing full diversity such as exposure to different immigrant groups</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>7. our clients are mostly Hispanics</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>8. our location makes it difficult to expose students to culturally- and linguistically-diverse clientele</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>9. rural setting, 12% culturally diverse population</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>10. lack of practicum sites</td>
<td>Training</td>
</tr>
<tr>
<td>11. being rural is somewhat of a challenge, but Appalachia is diverse in its own SES and linguistic way.</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>12. being located in the least diverse state in the nation (as defined by US government)</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>13. experience with interpreters</td>
<td>Translators &amp; Interpreters</td>
</tr>
<tr>
<td>14. geographical distance from the clinic</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>15. *none</td>
<td></td>
</tr>
<tr>
<td>16. *none</td>
<td></td>
</tr>
<tr>
<td>17. *more opportunities for treatment of mainstream (majority) clients</td>
<td></td>
</tr>
<tr>
<td>18. ongoing access to culturally-linguistically diverse population</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>19. lack of available practicum sites</td>
<td>Training</td>
</tr>
<tr>
<td>20. lack of cultural and linguistic diversity in more rural areas</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>21. availability of clients from culturally and linguistically diverse backgrounds</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>22. we do not have enough information about the specific cultures we are working with</td>
<td>Information/Awareness</td>
</tr>
<tr>
<td>23. not all students speak the language of many of our clients.</td>
<td>Student</td>
</tr>
<tr>
<td>24. it is offered in the undergraduate course work more than it is in the graduate course work</td>
<td>Training</td>
</tr>
<tr>
<td>25. *none right now</td>
<td></td>
</tr>
<tr>
<td>26. too few clients.</td>
<td>Training</td>
</tr>
<tr>
<td>27. having community service hours required to work amongst a diff population would help w/empathy</td>
<td>Training</td>
</tr>
<tr>
<td>28. culturally diverse individuals do not know about our clinic services</td>
<td>Information/Awareness</td>
</tr>
<tr>
<td>29. not everyone has the chance to do an outplacement where clients are culturally diverse. This depends both on student requests (specific placements they would like) and on supervisor availability.</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>30. more opportunities in clinicals to work with multicultural students/people</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>31. consistency across students within practica</td>
<td>Training</td>
</tr>
<tr>
<td>32. access to CLD clients</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>33. recruiting bilingual graduate students</td>
<td>Student</td>
</tr>
<tr>
<td>34. variability of # CLD populations</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>35. rural nature of the state</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>36. *since most of the practicum experience occurs in external cites, the experience varies from student to student. Most students do get to see clients from diverse backgrounds since we are in a city.</td>
<td></td>
</tr>
<tr>
<td>37. we don’t have many assessment tools/materials in other languages</td>
<td>Tools</td>
</tr>
<tr>
<td>38. access to cx (culturally diverse) population</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>39. variety of differences (all African Americans)</td>
<td>Lack CLD</td>
</tr>
<tr>
<td>40. clinical experience working with interpreters</td>
<td>Translators/Interpreters</td>
</tr>
<tr>
<td>41. not enough money to offer specific course in topic area</td>
<td>Training</td>
</tr>
<tr>
<td>42. lack of variety of diverse populations</td>
<td>Lack CLD</td>
</tr>
</tbody>
</table>

continued on next page
students not as eager to work in urban areas
*our program does not provide services to Deaf & Hard of Hearing
the problem of course creep and ever increasing scope of practice
sites with more diverse populations are 2 hours+ from campus
homogeneity of population
we try to get as many students as possible to intern in nearby urban areas, but not all can.
rural, spread-out nature of population
assessment of culturally diverse clients with some disorders
*cultural suspicions toward intervention process
appropriate timing of clinician skills
effective utilization of current assessment and treatment paradigms for CLD populations
students may speak the language but most are not biliterate.
training is not given as much importance as it should
requiring a course in African Am/Spanish Am/Native Am history would help in understanding development
interest in serving
finding competent interpreters
we don’t have a program specific to multiculturalism
*opportunity to interact with families
*limited exposure to voice cases
clinical experience working with clients in L1
not enough time for students to take all courses that would optimize mastery of standards
not enough time to present all the information students needs within their graduate program
need to do more outreach to local Latino families
intervention of culturally diverse clients with some disorders
*lack of parental support in some cases
*diversity of opportunities with many different types of diversity
*functional assessment and treatment of CLD populations
a course on poverty in America, inner city troubles etc. would also help. Too many graduate
students here on parents money have never had to go to a food bank 2 eat/donate plasma 4 money
valuing the inclusion into the curriculum
purchasing tests and materials appropriate for bilingual clients
The majority of students don’t know a foreign language
*most are low SES
experience dealing with families of CLD clients

*aThis comment was discarded from coding due to lack of clarity, not responsive to question, and/or no challenge stated.