

SCHOOL-BASED SPEECH-LANGUAGE PATHOLOGISTS'
TRAINING AND PERCEPTIONS OF TREATING
STUTTERING IN BILINGUAL SPEAKERS

by

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ABSTRACT

Purpose: To examine monolingual and bilingual school-based speech-language pathologists' training, perceived confidence, and perceptions of the treatment of bilingual children who stutter.

Method: Participants (n=137) completed an original online survey that examined the pre-professional training, perceived confidence, current practices, continuing education involvement, and beliefs of monolingual (n=115) and bilingual (n=22) clinicians. Respondents were identified through the ASHA member directory through an advanced search criteria in which they indicated that they were ASHA certified, currently working in an elementary school, and clinical service providers.

Results: The results from this study indicated that 13% of monolingual clinicians and 50% of bilingual clinicians believe their academic and clinical training regarding stuttering in bilinguals is adequate to serve this population. Additionally, only 17% of the monolingual clinicians and 60% of the bilingual clinicians reported feeling qualified to serve bilingual clients who stutter. Neither group of clinicians has attended many continuing education events that focus on stuttering in bilinguals. Furthermore, only 1% of monolingual clinicians and 18% of bilingual clinicians believe that they have adequate access to continuing education events that focus on stuttering in bilinguals.

Conclusion: Modifications to undergraduate and graduate programs should be made to include additional coursework and clinical training that addresses stuttering in bilinguals. Secondly, continuing education events that focus on this issue should be made readily available.

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INTRODUCTION

The American Speech-Language-Hearing Association (ASHA) requires that all speech-language pathologists (SLPs) are able to competently assess and treat children from diverse linguistic backgrounds (ASHA, 2010). Additionally, it is within an SLP's scope of practice to assess and treat children who stutter. Presently, there is no information regarding SLPs' perceived confidence and competence when providing services to bilingual populations who stutter. Clinicians' perceptions of confidence are critical to the therapeutic process, as high perceptions of confidence in providing services leads to better therapy outcomes (Zebrowski, 2007). The US Census Bureau (2010) indicated that the number of people speaking a language other than English at home increased by 140% from 1980 to 2007. In 2008, minorities encompassed approximately one third of the total U.S. population (US Census Bureau, 2010). Despite these increasing numbers of bilingual speakers in the United States, the presence of stuttering across all languages in both monolingual and bilingual speakers (Van Borsel, Maes, & Foulon, 2001), and the impact of confidence and competence on efficacy of services provided (Zebrowski, 2007), there is limited information about clinicians' preparedness to provide services to bilingual speakers who stutter, or about clinicians' perceived confidence and beliefs about such services.

Many school-based SLPs indicate low confidence in assessing and treating people who stutter (Tellis & Tellis, 2003). Clinicians have reported that their low confidence is a result of limited training in the area of fluency disorders (Tellis, 2007). Although the impact of these perceptions on practice has not been

systematically studied, there is evidence that perceptions of inadequacy may negatively impact delivered services (Zebrowski, 2007). Universities may provide few clinical and academic experiences in the area for fluency disorders because there is no ASHA accreditation standard detailing specific clinical training and coursework for stuttering. Tellis believes the lack of such a requirement allows undergraduate and graduate programs to have faculty who are not experts in stuttering teach these courses (Tellis, Bressler, & Emerick, 2014). In Tellis' recent survey of 255 school based SLPs, the majority of the school-based clinicians indicated that they were unaware of many basic aspects of stuttering assessment and treatment and that they did not believe they were adequately prepared to treat children with fluency disorders (Tellis, et al., 2014).

The number of bilingual individuals who require speech and language therapy services continues to grow as the rates of growth for bilinguals increase. Additionally, these growth rates will also extend to children within the schools that require therapy. The National Center for Education Statistics (2011) reported that the enrollment of minority children in schools increased in each region of the United States between 1989 and 2009. The implications of the increasing diversity in the schools will impact school-based clinicians, who will likely have increasingly diverse caseloads (Hammer, 2011). These increasing numbers indicate that speech-language pathologists will be providing more services to bilingual children. In a self-reported study, 83% of the speech-language pathologists who responded indicated that they were not competent when evaluating bilingual speakers and 80% indicated they were not competent when treating bilingual speakers (Campbell and

Taylor, 1992). Furthermore, Hammer, Detwiler, Detwiler, Blood, and Qualls (2004) found that one third of school-based clinicians had not received multicultural/multilingual training during their undergraduate or graduate education. Additionally, of the 213 school-based SLPs, many reported little or no confidence with assessing and serving bilingual Hispanic children (Hammer, et al., 2004). More recently, in a study of 46 fully certified SLPs, Cooley (2010) reported that 24% of participants did not receive any undergraduate or graduate training that addressed bilingualism and that the clinicians did not feel confident with providing services to bilinguals. The confidence levels of clinicians should presumably increase as they receive more specific training, education, and clinical practice with bilingual speakers.

In Hammer et al.'s study, the differences in confidence levels as they relate to the clinicians' language abilities were of special interest. Hammer and colleagues found that monolingual speech-language pathologists lacked confidence to assess bilingual children whose primary language is Spanish and when interacting with parents who do not speak English. In contrast to these monolingual clinicians, their survey reported that bilingual SLPs reported higher confidence when assessing bilingual children whose primary language is Spanish or English, and working with parents who do not speak English. Despite improvements in training in multicultural issues in recent decades, the clinicians in this study continued to not feel that they had received sufficient training in this area.

In summary, many speech-language pathologists do not feel competent with assessing and treating either of the following two populations: individuals who

stutter and bilingual individuals. If clinicians do not feel comfortable with assessing and treating these populations in isolation, it is unlikely that they would feel comfortable to assess and treat a child with these two characteristics in conjunction.

Although the relationship between bilingualism and stuttering has received interest for many years in the research community, many questions are yet to be answered. While the prevalence of stuttering for monolinguals is recognized to be about 1% worldwide (Bloodstein & Bernstein Ratner, 2008), a similar consensus has not been reached for the prevalence of stuttering for bilingual speakers. An early survey by Travis, Johnson, and Shover (1937) involved 4827 children and reported that the prevalence of stuttering for bilingual speakers was 2.61% and for monolingual speakers was 1.80%. Similarly, in a 1948 study by Stern, the prevalence for bilingual speakers was 2.16% and for monolingual speakers was 1.66% (Stern, 1948). However, an internet survey by Au-Yeung, Howell, Davis, Charles, and Sackin (2000) found a similar prevalence of stuttering for both the bilingual and monolingual speakers: 21.65% and 21.74%, respectively (Au-Yeung, et al., 2000). Although the prevalence in this study was similar for these two speaker groups, it was much higher than what has been reported in previous studies. According to the authors, many of respondents likely completed the survey because they themselves stuttered, creating an abnormally high rate of respondents who stuttered than what has been previously reported. This survey's topic also may have attracted more bilingual people who stutter, leading to comparable stuttering prevalence levels in bilingual and monolingual speakers.

Since such a large percentage (50%) of the world's population is bilingual (Van Borsel, et al., 2000), there has been considerable interest in determining if learning two languages simultaneously is a risk factor for stuttering. Unfortunately, this issue has also resulted in controversy. Howell, Davis, and Williams (2009) concluded that bilingual children are more likely to start to stutter and suggested that deferring the time that a child learns English may reduce the probability of stuttering onset. Researchers have offered several explanations for a possible link between bilingualism and stuttering. Among these explanations are syntactic overload when the child is unable to meet fluency demands (Karniol, 1992) and that the input of linguistically mixed utterances may trigger stuttering (Lebrun & Paradis, 1984). However, there is no evidence that deferring a bilingual education can prevent a child from stuttering (Van Borsel, et al., 2000). In fact, Shenker, Conte, Gingras, Courcay, and Polomeno (1998) illustrated that a second language does not need to be eliminated in order to reduce disfluencies in bilingual speakers. Shenker and colleagues conducted stuttering therapy in the predominant language of the child first and later added the less dominant language and found that the stutter-like disfluencies had decreased in both languages. Similarly, Trautman and Keller (2000) began fluency intervention with a bilingual male in both languages (predominant language first) and he too experienced an increase in fluency in both languages. Although these researchers chose to include both languages in the therapy process, numerous studies have reported that stuttering treatment in one language resulted in improvement in the untreated language (Van Borsel, et al., 2001). Thus far, in the studies of bilingual treatment for stuttering, fluency improved in both languages

regardless of whether the two languages were treated simultaneously or sequentially (Van Borsel, et al., 2001). Moreover, Druce, Debney, and Byrt (1997) found that the outcomes for bilingual speakers are similar to the outcomes for monolingual speakers.

A number of reports have suggested that bilingual children may be at a higher risk for over-identification for stuttering. Mattes and Omark (1991) reported that a 7-year-old Hispanic male who was learning English as a second language exhibited frequent hesitations and word repetitions suggestive of stuttering. However, these disfluencies were not observed in Spanish. The researchers concluded that the disfluencies reflected the child's restricted language proficiency in English rather than a stuttering disorder. Consequently, Matte and Omark suggested that bilingual children should be assessed and diagnosed in both languages if they are suspected of having a stuttering disorder. Watson and Kayser (1994) agreed that if disfluencies are present only in the second language, these disfluencies may be a reflection of the limited acquisition and proficiency of that language. Secondary behaviors such as eye blinks and body tension should also be observed in a person who stutters (Van Borsel, et al., 2001). Stuttering in one language and not in the other as well as stuttering in both languages with similar behaviors in each language appear to be a highly unusual occurrence. Bilinguals who stutter most often present disfluencies in both languages but the disfluencies vary from language to language (Van Borsel, et al., 2001; Byrd, Bedore, & Ramos, 2015; Byrd, Watson, Bedore, & Mullis, 2015).

As indicated by numerous previous studies, clinicians do not feel confident with providing services to either individuals who stutter or bilingual individuals. These low levels of confidence may be due to limited coursework, clinical training, and access to continuing education events that focus on these areas. Although previous research has focused on these two issues in isolation, there has been no research that addresses clinicians' pre-professional training and perceived confidence levels in providing services to bilingual children who stutter. Thus, the purpose of this study was to examine the adequacy and availability of coursework, clinical training, and continuing education events that focused on stuttering in bilingual populations. Additionally, monolingual and bilingual school-based clinicians' perceived confidence in the assessment and treatment of bilingual children who stutter was investigated. Finally, clinicians' beliefs about bilingual children who stutter were examined. The clinicians' beliefs about this population were compared to the results from current studies that addressed the commonly held beliefs. To explore these issues, a survey was conducted to answer the following questions:

1. Do school-based clinicians believe that their academic preparation and clinical training regarding stuttering in bilingual children were adequate?
2. Do school-based clinicians feel confident when providing services to bilingual children who stutter?
3. Do school-based clinicians believe continuing education events that focus on stuttering in bilingual populations are available to them?

4. What are school-based clinicians' beliefs about the assessment and treatment of bilingual children who stutter?

METHODS

Survey Development

The majority of school-aged children receiving therapy are being seen by a school-based clinician, where 53% of speech-language pathologists in the United States are employed (ASHA, 2014). To determine the demographics, pre-professional training, perceived adequacy of training, perceived confidence levels, current practices, continuing education involvement, and beliefs that these school-based SLP's have in regards to assessing and treating bilingual children who stutter, an original Qualtrics survey was created. A link to the survey was sent to twelve monolingual and bilingual SLPs with experience working in the schools for feedback regarding the completeness and relevance of the questions, as well as question content and wording. The clinicians reported it took less than 20 minutes to complete and their additional feedback was utilized to create the final survey instrument (see Appendix A).

The survey consisted of five parts. Part I, Background Questions, included questions regarding the participants' demographic information, language abilities, qualifications, and primary setting of work. Part II, Background in Bilingualism and Stuttering, sought to determine the SLPs undergraduate and graduate coursework, workshops, and clinical experience that focused on the following three topics: bilingual children, monolingual children who stutter, and bilingual children who

stutter. This section also included questions regarding the clinicians' perceived confidence with assessing, diagnosing, and treating bilingual children who stutter. An additional purpose of this section was to examine differences in the clinicians' confidence when providing services to bilingual versus monolingual children. The questions that focused on the clinicians' confidence were Likert-type scale questions where the clinicians could indicate the extent to which they agreed with the question.

Part III, Assessment and Treatment, sought to determine the methods that school-based clinicians use to treat children who stutter, bilingual children, and bilingual children who stutter. This section asked bilingual clinicians which language they use to treat a bilingual child (i.e. clinician's primary language, child's primary language, both languages), and the likelihood of the monolingual and bilingual clinicians enlisting the help of an interpreter, fluency specialist, or bilingual colleague to provide services to this population. This section also involved questions that sought to determine the clinicians' likelihood to seek assistance from a stuttering or bilingual mentoring group within their school district. Part IV, Continuing Education, was included to obtain information regarding the clinicians' plans or desire to learn more about stuttering in bilingual populations, as well as their beliefs concerning their access to such information.

Part V, Beliefs Regarding Bilingual Children Who Stutter, sought to determine the beliefs and perceptions that clinicians have about this population. Two questions were related to the disfluencies that the clinicians would expect to see in a monolingual and bilingual child who stuttered. Clinicians were also asked to

indicate their level of agreement (from strongly disagree to strongly agree) to statements that are commonly held beliefs of bilingual children who stutter. The last question asked for the clinicians' greatest challenge with providing services to bilingual children who stutter.

The following definitions of the terms "bilingual" and "monolingual" were provided at the beginning of each section of the survey:

Bilingualism refers to one's ability to communicate with others in more than one language. The speaker's proficiency in the languages may vary depending on different conversational settings and partners, among other variables.

For the purpose of this survey, bilingualism includes:

- Simultaneous language learners*
- Sequential (successive or second) language learners*
- Dual language learners*
- English language learners*
- Limited English proficiency*

A monolingual client is a single language user (Paradis, Genessee, & Crago, 2011).

Participants

Potential survey respondents were identified through the ASHA member directory using the following criteria in an advanced search: ASHA certified, currently working in an elementary school, and a clinical service provider. Based on this search, 21,984 members were identified. From this corpus, 1,197 names were not included in the potential pool of participants due to privacy settings. The survey

was sent to 6,929 clinicians, requesting their participation. The emails were sent in the middle of the fall term, a time when school-based SLPs may more likely participate, according to a knowledgeable supervising professor's experience in school settings.

RESULTS

Demographics

One hundred and thirty seven clinicians initiated and/or completed the survey and represented all regions of the United States, except the West South Central and Pacific regions (see Table 1). Twenty-two of the 137 respondents (16.7%) self-identified that they were bilingual. Only five of all respondents reported that they received a speech-language pathology graduate degree with a bilingual emphasis. The highest level of education for all 137 participants was a master's degree, with only one person reporting having a bachelor's degree. Through the advanced search criteria, all respondents indicated that they were clinical service providers and working in an elementary school. On average, the monolingual and bilingual clinicians completed their highest degree eighteen ($SD=10$; $range=2-43$) and twelve years ($SD=10$; $range=2-32$) ago, respectively. Respondents represented a wide range of years of experience practicing as an SLP (i.e., from more than one year to more than 30 years; see Table 1). All of the respondents held the Certificate of Clinical Competence but none of them held board certification in fluency disorders.

Pre-professional Training and Perceptions

The number of undergraduate and graduate courses that addressed bilingualism, stuttering in monolingual populations, and stuttering in bilingual populations is shown in Table 2. As part of either their undergraduate or graduate education, 38% of respondents reported providing services to bilingual clients, 75% provided services to monolingual clients who stutter, and less than 1% of respondents provided services to bilingual clients who stutter.

The vast majority of monolingual respondents did not believe that their graduate and undergraduate education adequately prepared them to assess or treat bilingual children who stutter. Only 7 out of 94¹ monolingual respondents (13%) believed that they were adequately prepared to assess and 6 out of 95 respondents (15%) believed they were prepared to treat this population. The bilingual respondents reported significantly higher perceptions of preparedness, with 7 out of 14 (50%) participants feeling well prepared to assess and 5 out of 16 (31%) feeling adequately trained to treat bilingual children who stutter.

Clinicians' Perceptions of Confidence

The clinicians' beliefs regarding their qualifications to serve bilingual clients, monolingual clients who stutter, and bilingual clients who stutter are shown in Figures 1, 2, and 3. Less than half of the monolingual respondents (46%) and 80% of the bilingual respondents reported that they are qualified to serve bilingual clients. Only 17 out of 96 (17%) of the monolingual clinicians indicated that they were

¹ Numbers of bilingual and monolingual respondents vary across questions as not all respondents answered all questions.

qualified to serve bilingual clients who stutter (i.e. responded 4, 5, or 6 on a 1-6 scale with 6 indicating highly qualified). This was in contrast to the majority of the bilingual clinicians reporting they were qualified (13 out of 21 [60%]). A larger percentage of both the monolingual and bilingual participants (74% and 80%, respectively) believe that they are qualified to provide services to monolingual clients who stutter.

Figures 4 and 5 present the clinicians' reported confidence in diagnosing and treating stuttering in monolingual and bilingual children. Mirroring their feelings of being qualified, the majority of both monolingual and bilingual clinicians indicated that they felt confident in their ability to diagnose stuttering in monolingual children who stutter and reported that they do not find it challenging to treat this population. Although the bilingual clinicians reported high confidence with treating bilingual children who stutter, the monolingual clinicians did not. Similarly, the bilingual clinicians did not report that treating stuttering in bilingual populations challenging, unlike the reports of the monolingual clinicians.

Current Practices

The clinicians reported that they assess and treat, on average, 8 bilingual children ($SD=18.6$), 2 monolingual children who stutter ($SD=1.4$), and 1 bilingual child who stutters ($SD=0.9$) each year. As might be expected, the bilingual clinicians assess and treat a higher number of bilingual children ($M = 24$; $SD = 39$) than do the monolingual clinicians ($M = 4$; $SD= 6$).

Table 3 presents the reported frequencies that the monolingual and bilingual clinician include parents, interpreters, and support personnel when they treat

monolingual and bilingual children who stutter. Both the monolingual and bilingual clinicians reported that they include parents and teachers on a regular basis for treating both populations. The clinicians include the parents of monolingual children in therapy a slightly higher percentage of the time than they include the parents of bilingual children in therapy (92% and 86% of the time, respectively). Neither group of clinicians reported that they regularly counsel monolingual or bilingual parents. Nor did either group indicate that they regularly include interpreters or fluency specialists in the therapy process. Additionally, both groups of clinicians rarely refer their bilingual clients who stutter to a bilingual speech-language pathologist. The monolingual clinicians reported that they work with support personnel when treating a bilingual child who stutters a higher percentage of the time than do the bilingual clinicians (64% and 36% of the time, respectively).

Of the 137 respondents, 61 clinicians (45%) reported that they currently have a bilingual child who stutters on their caseload. As might be expected, a higher percentage of bilingual clinicians (73%) have a bilingual child who stutters on their caseload than do the monolingual clinicians (44%). Many of the bilingual clinicians (63%) reported that they treat bilingual children who stutter in a group with other bilingual children who do not stutter, whereas most of the monolingual clinicians (67%) treat these children either in a group with other children who stutter who are not bilingual or with children who have other communication disorders. Very few monolingual or bilingual clinicians reported that they treat the bilingual children who stutter in a classroom.

Of the 22 bilingual clinicians, 72% reported that they provide services to the bilingual child who stutters in both languages (as opposed to either the child's primary or non-primary language). Of the clinicians who do not speak both languages of the child, 67% indicated that they provide treatment in their own primary language (as opposed to the child's primary language with the use of an interpreter or both languages with an interpreter).

Continuing Education

The number of in-service courses, workshops, and conferences that the participants have completed or attended since graduate school are shown in Table 4. The majority of respondents have completed or attended between one and five courses, workshops, and conferences that addressed services to bilingual clients and monolingual clients who stutter (55% and 65%, respectively). On the contrary, only 20% of the participants have attended between one and five workshops and conferences that addressed services to bilingual clients who stutter.

A small percentage of both monolingual (15%) and bilingual (32%) clinicians reported that they have read books or articles that address bilingualism, stuttering in monolingual populations, and stuttering in bilingual populations over the past year. The majority of both monolingual and bilingual clinicians do not believe they have access to adequate resources that address these three populations. In particular, only 1% of monolingual clinicians and 18% of bilingual clinicians believe adequate resources that address stuttering in bilingual populations are available to them.

The monolingual clinicians expressed interest in learning about the following areas: stuttering in bilingual populations, stuttering in monolingual populations, bilingual issues, and counseling parents of children who stutter. The bilingual clinicians similarly expressed interest in the areas of stuttering in bilingual populations, and including and counseling parents of children who stutter. Both groups most frequently reported interest in continuing education events that focuses on stuttering in bilingual populations.

Beliefs Regarding Bilingual Children Who Stutter

The majority of both the monolingual (72%) and bilingual (76%) clinicians believe that treatment should be provided to a bilingual child who stutters in both languages. Both groups of clinicians indicated that each possible disfluency type (i.e., sound repetition, monosyllabic word repetition, revision, syllable repetition, interjection, unfinished word, phrase repetition, audible sound prolongation, and polysyllabic word repetition) is expected in a monolingual or bilingual child who stutters. Additionally, the clinicians indicated that all factors are important in confirming that a bilingual child stutters (i.e., parent report, student report, teacher report, bilingual speaker report, bilingual SLP report, disfluencies present in first language but not the second language, disfluencies present in the second language but not the first language, disfluencies present in both languages, disfluencies in neither language, presence of an expressive language impairment, secondary behaviors).

The majority of bilingual respondents (71%) reported that they believe that bilingual children are at a higher risk for over-identification, whereas less than half

of the monolingual clinicians (32%) believe this. Furthermore, a small percentage (25%) of clinicians report believing that learning two or more languages at the same time increases the risk of stuttering. Less than 1% of respondents indicated that they believe that stuttering is more severe in bilingual speakers and that stuttering therapy is less effective for bilingual speakers. Lastly, only 12% of the clinicians reported that they believe that therapy outcomes are less favorable for bilingual speakers.

DISCUSSION

The current study aimed to examine the pre-professional training and perceived adequacy of training, perceptions of confidence, current treatment practices, continuing education involvement, and beliefs of school-based clinicians regarding bilingual children who stutter. The following sections will discuss the findings from this study in light of our current understanding of this clinical population.

Pre-professional Training and Perceptions

This study demonstrated that additional training and coursework is needed at the undergraduate and graduate level that addresses bilingualism in general, and specifically stuttering in bilingual populations. Whereas 73% of the clinicians completed between one and two graduate courses that addressed stuttering in monolingual populations, 27% reported that they did not complete any graduate courses that address bilingualism. Nonetheless, this finding is an improvement from the study by Roseberry-McKibbin, Brice, and O-Hanlon (2005) that reported that 38% of respondents had not taken a single course that addressed bilingualism.

Although the results in the present study indicate a slight improvement in bilingualism training, the number of courses still appear to be insufficient as indicated by the monolingual clinicians' responses to adequacy of academic preparation. Of further concern, only 7% of all clinicians completed between one and two courses that addressed stuttering in bilingual populations. Furthermore, although many of the clinicians' education included clinical services to monolingual children who stutter, a select few provided treatment to bilingual children who stutter. It should not be overlooked that in contrast to the study by Tellis et al. (2014) in which the SLPs indicated that they were not adequately prepared to treat stuttering, many of the clinicians reported more sufficient training and coursework in the area of stuttering in monolingual populations. Nevertheless, the results showed that neither group of clinicians (most notably the monolingual clinicians), believe that their undergraduate and graduate education adequately prepared them to assess and treat bilingual children who stutter. Evidently, more graduate coursework and clinical training is necessary that specifically addresses the treatment of this population.

Clinicians' Perceptions of Confidence

The current study revealed that efforts are needed to increase clinicians' (specifically monolingual clinicians) confidence with providing services to bilingual children who stutter. As mentioned above, improved coursework and training in this area may lead to an increase in confidence levels.

It should be noted that the clinicians reported surprisingly high levels of confidence in treating stuttering in monolingual populations in comparison to the

previous study by Tellis and Tellis (2003). This increase may be due to the clinicians' prior knowledge (from the invitation email) of the purpose of the study. If the clinicians were interested in issues related to bilingualism and/or stuttering, they may be more keen to complete the survey. One can hope that this increase in confidence is due to the measures taken to improve the coursework and clinical training in stuttering. The fact that many of the clinicians feel confident in their abilities to provide services to monolingual children who stutter but not bilingual children who stutter indicates an important distinction. First, it demonstrates that the clinicians realize that stuttering treatment cannot be generalized across languages (Van Borsel et al., 2001; Byrd et al., 2015). Although the clinicians are confident with treatment in their own language, they understand that the addition of a second language changes the treatment plan for a client. This is encouraging that the clinicians see that stuttering treatment should be differential. Additionally, the monolingual clinicians' particularly low confidence in treating both bilingual children and bilingual children who stutter suggests that stuttering itself may not be the issue, but their lack of second language ability. The notion that lack of bilingualism training may be the primary problem is consistent with the conclusions of Hammer et al.'s (2004) study that indicated that the clinicians received little training in multicultural issues, and thus were not confident in assessing and treating bilingual children. Secondly, the current study showed that the bilingual clinicians reported higher confidence levels with providing services to bilingual children who stutter. This finding is also consistent with the survey of Hammer and colleagues who found that the bilingual SLPs were more confident with providing

services to bilingual children than the monolingual SLPs (Hammer et al., 2004). Provided that both groups were confident with stuttering assessment and treatment in monolingual populations, it suggests that the low levels of confidence reflected in the monolingual clinicians' results is due to inadequate training in the areas of bilingualism and stuttering in bilingual populations. The increased graduate coursework and clinical preparation in the field of stuttering may be reflected in the clinicians' higher confidence. Whereas it may be improbable to expect more clinicians to become bilingual, the confidence levels may be improved with more comprehensive training and coursework in this area, as well continuing to recruit more bilingual speakers to the field.

It should be considered that reported levels of high confidence does not equal the clinicians' competence with providing services. One cannot assume that the children are receiving high quality services based solely on the clinicians' reported high levels of confidence.

Future studies should aim to identify predictors for high levels of confidence.

Current Practices

The bilingual clinicians assess an average of 24 bilingual children (SD=39.4) and 2 bilingual children who stutter (SD=1.9) each year. In addition to speaking the two languages of the child, the bilingual clinicians may also be more confident with serving this population because they assess and treat more bilingual children and bilingual children who stutter than do the monolingual clinicians. The monolingual clinicians may not be confident with providing bilingual stuttering services simply because they have had little to no experience with doing so. Additionally, few of the

monolingual clinicians include interpreters in the therapy process, further inhibiting them from communicating in the primary language of a bilingual child.

Waheed-Khan (1998) found that the incorporation of family members in stuttering treatment may be essential for some bilingual children's success. It is concerning that both the monolingual and bilingual clinicians reported that they include parents more often in the stuttering treatment of monolingual children than when treating bilingual children. In the present study, clinicians indicated that they include parents in the stuttering treatment of monolingual children 92% of the time, which is a slight increase from the study by Tellis et al. (2014) that reported 88% of school-based clinicians included parents in the treatment process. Further, in the current study the clinicians' inclusion of parents for the treatment of bilingual children in the present study was 86%. Additionally, neither group of clinicians indicated that they regularly counsel the parents of monolingual or bilingual children who stutter. The clinicians in the present study counsel monolingual parents 23% of the time and bilingual parents 48% of the time, a decrease in the finding by Brisk, Healey, and Hux (1997) that 80% of the respondents regularly counsel the parents of monolingual children who stutter. It is puzzling that the respondents in the present study reported counseling the bilingual parents more often than the monolingual parents (a reversal from the previously reported inclusion of parents in the therapy process). Furthermore, there does not appear to be a reason that the clinicians are counseling parents less often than previously. Additionally, it is unclear how parents can be included in the treatment process, yet the clinicians do not believe that they are counseling the parents. This may be due to

the clinicians' definitions of counseling. A future study may include more questions regarding the prevalence of counseling monolingual and bilingual parents and reasons behind the prevalence.

Continuing Education

In general, the respondents reported that they have not engaged in many continuing education activities over the past year that addressed bilingualism, stuttering in monolingual populations, and stuttering in bilingual populations. Similar to Brisk et al.'s findings (1997), it is possible that the lack of interest in continuing education in these areas may be due to the small number of monolingual and bilingual stuttering clients on their caseloads (on average only two monolingual children who stutters and one bilingual child who stutters). Another possible explanation may be that the clinicians are not engaging in continuing education activities because these events are not available to them. In particular, a small percentage of the clinicians believe that adequate resources that address bilingualism (35%) and stuttering in bilingual populations (10%) are available to them. Furthermore, only 13% of the respondents believe that they have sufficient access to continuing education events that focus on stuttering in bilingual populations. A positive outcome from the current study revealed that 62% of clinicians believed they had adequate access to stuttering information, in contrast to 43% of the clinicians in Brisk et al.'s (1997) report. This finding suggests that positive changes have been made in continuing education for stuttering. Nevertheless, it appears there continues to be a paucity of events available that addresses the complexities of stuttering in bilingual speakers. In addition, less than

15% of monolingual clinicians and less than 35% of bilingual clinicians have read books or articles in the past year that focus on stuttering and/or bilingualism. Once again, it is difficult to assert whether this low percentage is due to a small number of stuttering and bilingual clients, time restraints from busy schedules, or a scarcity of resources.

Although the clinicians have not been active in regards to continuing education events over the past year, it is encouraging that some are interested in learning more about stuttering in bilingual populations (40% of respondents). It is troubling that clinicians are interested in this area, yet feel they do not have access to more information. It is apparent that more continuing education events should focus on stuttering in bilingual populations.

Beliefs Regarding Bilingual Children Who Stutter

It is interesting to note that although the majority of respondents believe that treatment should be provided to a child in both languages, very few clinicians use interpreters in the therapy process to do so. In fact, the monolingual clinicians indicated that they either never or rarely included interpreters in the therapy process. This may be due to a lack of interpreters in certain school districts, or that it is more time and cost effective to deliver services in the clinician's own primary language. Although many clinicians believe that treatment should be provided in both languages, previous studies have shown that treatment in one language can generalize to improvement in the second language (Van Borsel et al., 2001).

Whereas the majority of the bilingual respondents believe that bilingual children are at a risk for over-identification of stuttering, less than half of the

monolingual clinicians believe this. Mattes and Omark (1991) discuss how bilingual children may be at risk for over-identification of stuttering due to limited language proficiency in the child's second language. Bilingual clinicians may be more knowledgeable regarding this possibility due to their own experience as bilingual speakers and their understanding of differential language acquisition.

It is promising that less than 25% of both groups of clinicians believe that learning two or more languages simultaneously increases the risk of stuttering. Furthermore, less than 1% of respondents believe that stuttering is more severe in bilingual speakers and that eliminating one of the two languages will eliminate or reduce stuttering. Although this subject is controversial, the study by Shenker, et al. (1998) emphasized that eliminating the second language is not necessary to reduce disfluencies.

The current study portrays other encouraging results: less than 1% of respondents believe that fluency treatment is less effective for bilingual speakers. Additionally, only 12% of the clinicians believe that therapy outcomes are less favorable for bilingual speakers. Research has confirmed that indeed stuttering treatment is effective and has favorable outcomes for bilingual speakers who stutter (Druce et al., 1997).

Surprisingly, despite receiving minimal coursework and clinical training in the area of stuttering in bilingual populations, the majority of the respondents do not believe many of the common misconceptions regarding bilingual speakers who stutter. This unexpected result may be related to the wording of the question that placed a negative connotation on the unfounded beliefs. Therefore, the clinicians

may have responded to these questions in a manner to avoid being perceived as having negative beliefs about bilingual children who stutter. For example, one belief stated: “fluency treatment is less effective for people who are bilingual.” This statement may be perceived as being negative about bilingual speakers who stutter; thus, the clinicians may have been wary to indicate a high level of agreement with such a statement. Nevertheless, it is hopeful that the respondents truly agree with their indicated answers and do not hold the common misconceptions about bilingualism and stuttering.

LIMITATIONS

The design of the current investigation presents several limitations that must be considered when interpreting the results. A large limitation is that the survey is self-reported and voluntary. Thus, many of the respondents may have a special interest in stuttering or bilingualism, which produces a biased sample. Additionally, only 22 of the clinicians reported to being bilingual. Whereas the percentage of bilingual speakers in this study (16.3%) is well above the national average of bilingual SLPs (5%, ASHA, 2010), the number is still small. Further, a self-report of being bilingual does not equate to true language proficiency in a second language. A future study should attempt to obtain a sample with more numbers of bilingual clinicians, as well as determine the language proficiency of the self-reported bilingual speakers.

A second limitation is the possible response set that may be present when questions about bilingualism, stuttering in monolingual populations, and stuttering in bilingual populations are grouped together. If the current study had only focused

on stuttering in monolingual populations, the clinicians may have reported confidence levels that are similar to past studies on this subject.

Finally, despite efforts to assess appropriateness of question wording to lead to meaningful responses, some items could not be usefully interpreted. For example, the clinicians did not appear to understand the meaning of a “mentoring group” for stuttering in monolingual and bilingual populations. A “mentoring group” was intended to refer to a group of clinicians within the school districts that met regularly to discuss techniques and innovative therapy ideas. The term was not defined and thus the responses indicated a lack of understanding regarding the meaning. Secondly, the question regarding the importance of observer reports and disfluencies present in one or both languages did not appear to be fully understood. The lack of understanding was indicated by the clinicians reporting high levels of importance for each factor as opposed to differential reporting of importance.

CONCLUSIONS

The results from this study indicated that school-based clinicians, particularly monolingual SLPs, do not believe their academic and clinical training regarding stuttering in bilinguals is adequate. Although the bilingual clinicians feel confident providing services to both monolinguals and bilinguals who stutter, the monolingual clinicians only feel confident providing services to monolinguals who stutter. Additionally, neither group of clinicians appeared to believe that they have adequate access to continuing education events that focus on stuttering in bilinguals. Nevertheless, both groups are interested in learning more about this

population. Encouragingly, the clinicians do not hold many of the common misconceptions associated with stuttering in bilinguals.

In conclusion, modifications to undergraduate and graduate programs should be made to include additional coursework and clinical training that addresses stuttering in bilinguals. Secondly, continuing education events that focus on this issue should be made readily available. These implementations should better prepare school-based clinicians to competently and confidently serve bilingual children who stutter.

APPENDIX: SURVEY RESULTS

Table 1: Percentages of monolingual and bilingual respondents' regional location and years of SLP practice.

Regional location	Monolingual (n=103)	Bilingual (n=22)
East North Central	12.6	22.7
East South Central	14.6	32.8
Middle Atlantic	16.5	4.5
Mountain	24.3	22.7
New England	8.7	4.5
Pacific	-	-
South Atlantic	12.6	-
West North Central	10.7	13.6
West South Central	-	-
Years of practice		
Less than 1	14.6	22.7
1-5	16.8	31.8
6-10	13.1	4.5
11-15	22.6	22.7
16-20	7.3	4.5
21-25	-	-
26-30	9.5	-
More than 30	12.4	13.6

Table 2. Percentages of monolingual and bilingual respondents' reported numbers of undergraduate and graduate courses in bilingualism and stuttering in monolingual and bilingual speakers.

# of Undergrad Courses	Monolingual			Bilingual		
	Bilingualism	Stuttering in Monolingual Speakers	Stuttering in Bilingual Speakers	Bilingualism	Stuttering in Monolingual Speakers	Stuttering in Bilingual Speakers
0	68	29	93	45	32	86
1	24	55	4	32	50	9
2	3	10	-	9	9	-
3	2	2	-	5	-	-
4	-	-	-	-	5	-
<4	1	1	1	5	-	-
# of Grad Courses						
0	56	12	90	32	5	77
1	34	60	5	32	77	14
2	3	19	1	9	5	5
3	-	-	-	-	-	-
4	-	-	-	5	5	-
<4	2	1	1	14	-	-

Table 3: Mean (*SD*) frequencies of monolingual and bilingual clinicians' inclusion of others in their treatment of monolingual and bilingual children who stutter.

	Monolingual		Bilingual	
	Monolingual Children	Bilingual Children	Monolingual Children	Bilingual Children
Parents	4.4, (0.7)	4.6, (0.7)	4.4, (0.8)	4.1, (1.1)
Interpreters	-	4.1, (1.1)	-	2.9, (1.3)
Teachers	4.7, (0.5)	4.6, (0.7)	4.4, (1.1)	4.2, (1.1)
Support Personnel	3.8, (1.1)	3.7, (1.1)	3.2, (1.1)	3.3, (1.1)

1=never, 5=always

Table 4: Percentages of monolingual and bilingual clinicians who have participated in continuing education events since graduating

No. of CE Events	Monolingual			Bilingual		
	Bilingual	Mono-stutter	Bilingual Stutter	Bilingual	Mono-stutter	Bilingual Stutter
0	26	14	77	5	18	54
1-5	50	61	15	59	63	36
6-10	12	12	-	14	14	-
<10	6	8	-	18	-	5

Figure 1: Monolingual and bilingual clinicians' reported levels of qualification to serve bilingual speaker

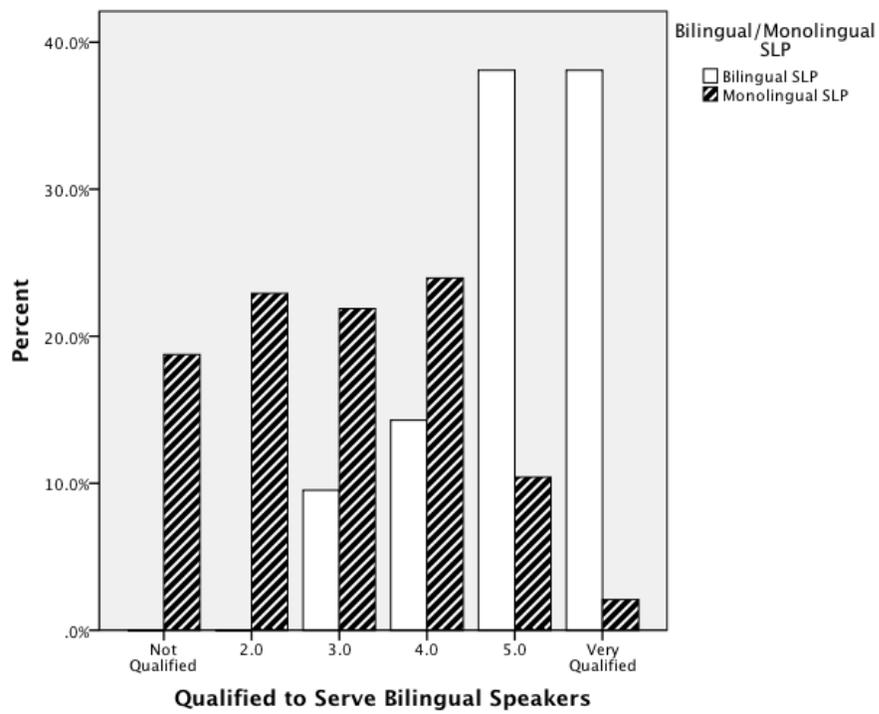


Figure 2: Monolingual and bilingual clinicians' reported levels of qualification to serve monolingual speaker who stutter

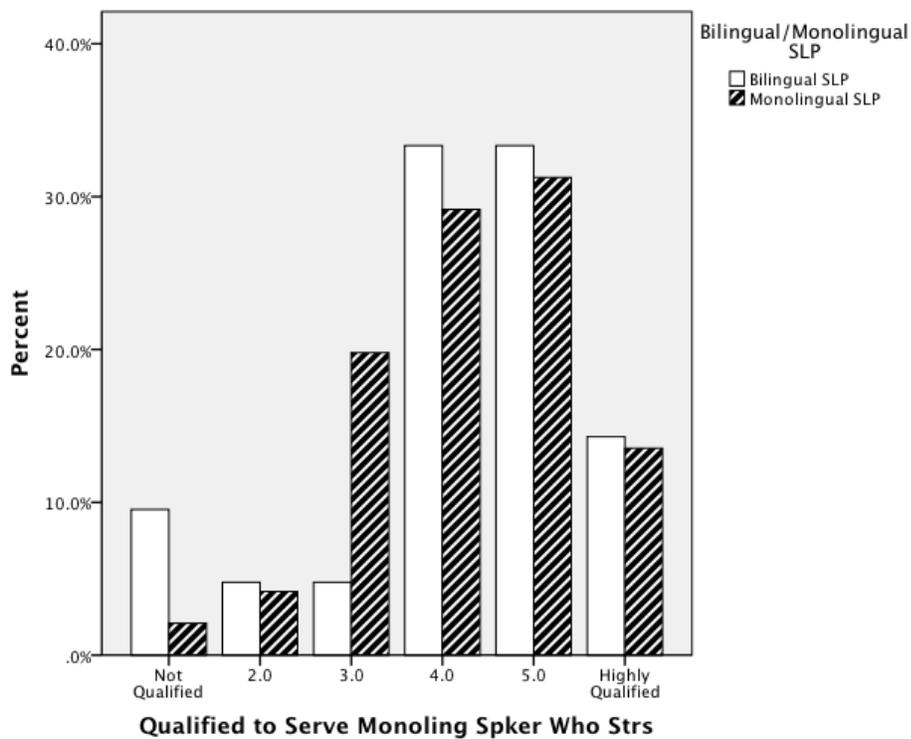


Figure 3: Monolingual and bilingual clinicians' reported levels of qualification to serve bilingual speaker who stutter

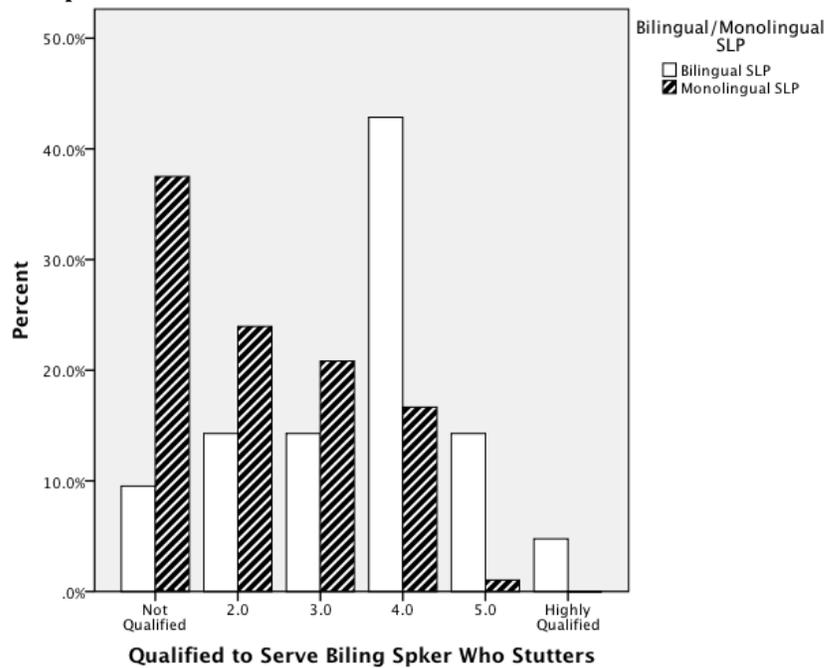
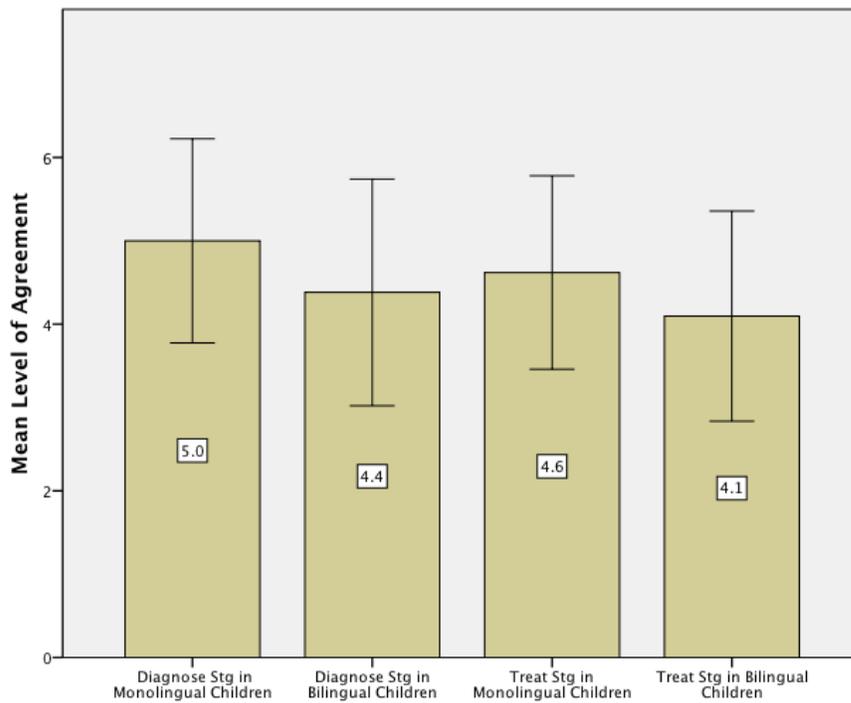
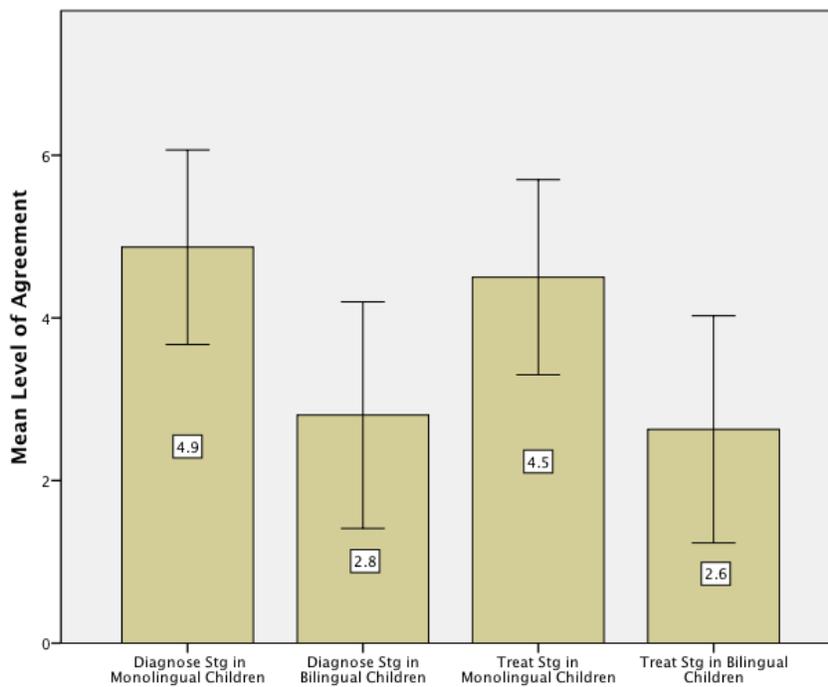


Figure 4: Bilingual clinicians' mean levels of agreement with the statement "I am confident to..."



1= strongly disagree, 6= strongly agree

Figure 5: Monolingual clinicians' mean levels of agreement with the statement "I am confident to..."



1= strongly disagree, 6=strongly agree

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