

Effects of Second Language Usage on Genetic Counseling Training and Supervision

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Abstract We conducted an exploratory study of the experiences of genetic counselors who have either trained or supervised in a second language to assess the relevance of this issue to genetic counseling training and supervision. Two hundred-thirty NSGC members, CAGC members and genetic counseling students completed the online questionnaire. Many of the respondents reported that training and supervision differed when another language was involved. Supervisors reported difficulty in assessing students' counseling skills and discomfort with an incomplete understanding of session content. Students described a greater focus on vocabulary at the expense of psychosocial dimensions. Despite this, most felt that using another language enhanced their training experience. As such, training programs might consider increasing support to these learners and supervisors by explicitly acknowledging the challenges they face, providing students with language tools to aid in their acquisition of basic skills and providing supervisors with new methods for assessing student counseling skills when using other languages.

Keywords Bilingualism · Genetic counseling student supervision · Language training · Multicultural competence · Recruitment · Training

In recent years, there has been much literature published describing the need to increase the diversity of those entering the field of genetic counseling (Lega et al. 2005; Mittman et al. 1995; Oh and Lewis 2005; Punaless-Morejon and Rapp 1993; Schoonveld et al. 2007; Smith et al. 1993; Weil and Mittman 1993). As discussed nearly 2 decades ago by Punaless-Morejon and Rapp (1993), there is a shortage of bicultural and bilingual genetic counselors. This has important implications for the profession, as counselors who share a patient's culture and language may have a unique ability to meet the needs of the individuals from their respective culture (Weil and Mittman 1993). In 2008, Mittman and Downs (2008) described the efforts made by the National Society of Genetic Counselors to increase the presence of visual minorities in the field. These efforts, however, have not been overly successful, as only 7 % of the respondents to the National Society of Genetic Counselors (NSGC) 2008 professional status survey self-identified as belonging to a racial group other than Caucasian (Smith et al. 2009). Of note, however, the professional status survey did not inquire about the counselor's cultural background or language abilities, and so the term "Caucasian" may not reflect the cultural identifications or diversity of language capabilities of the genetic counselors who responded.

The study of live supervision in genetic counseling training and the impact that supervision has on trainees and supervisors has also emerged as an important theme in recent years in the genetic counseling literature. Live supervision is a key component of the training of genetic counselors (McCarthy and LeRoy 1998). It involves an ongoing

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relationship between the student and the supervisor that allows for the professional development of new genetic counselors in a setting where patients still receive appropriate care. Supervision requires good communication between the supervisor and student, as feedback is an important aspect of the process (Hendrickson et al. 2002). For the purposes of this article, the term *supervision* differs from that of training. *Training*, represents the full experience of obtaining one's Master's degree in genetic counseling, and includes didactic courses as well as clinical rotations.

The process of student supervision is not without its difficulties. Both students and supervisors may experience emotional reactions and be faced with situations that challenge them. Among the various issues that may arise during the supervision process, it has been noted that direct supervision—where the counseling supervisor is in the same room—increases a student's anxiety (Borders et al. 2006; Hendrickson et al. 2002) and that students may feel as though supervision is a threat to their autonomy and sense of adequacy (McIntosh et al. 2006). The process of supervision may also have negative consequences for genetic counselor supervisors. It has been suggested that they too may have increased anxiety due to a lack of formal training in the act of supervision and may feel insecure in the role of authority figure (Lindh et al. 2003; McIntosh et al. 2006). McCarthy and LeRoy (1998) suggest that cultural differences may play a role in the relationship between the supervisor and the student and, as this relationship is a key factor in the training process, may have either a positive or negative impact on supervision. This may have implications for the present study, given that many individuals who speak English as a second language or who are bilingual may have significantly different cultural affiliations from their supervisors.

Although a variety of challenges in genetic counseling training and supervision have been described, the ways in which a second language may impact these activities have yet to be investigated. The genetic counselors interviewed in Punales-Morejan and Rapp's (1993) study on ethnocultural diversity in genetic counseling noted that they would have liked the opportunity to practice a second language during their training in order to gain exposure to a more diverse patient population. These authors, however, felt that it is likely not possible to implement second language training into genetic counseling training programs. More recently, Schoonveld et al. (2007) investigated how training differs for those who are considered a minority in the field (males and individuals who self-identify as a visible minority) and recommended that genetic counseling programs provide language training to help diversify the profession.

The recognition of the importance of multicultural education and the need to diversify the profession is not unique to genetic counseling. Medical and nursing schools in North America have increasingly recognized the growing

importance of incorporating cross-cultural curricula into medical education. Great strides have been made in the development of programs for the education of nurses (Cross et al. 2008; Hunter 2008; Koskinen et al. 2009; Lee et al. 2006) and physicians (Betancourt and Cervantes 2009; Miller and Green 2007; Wear 2003) in cross cultural issues and communication skills. In parallel, efforts have been made to increase the diversity of health care professionals through recruitment and retention programs, notably in the nursing profession (Anonson et al. 2008; Beacham et al. 2009; DeLapp et al. 2008). In turn, a number of researchers have focused on the educational needs of culturally diverse students in nursing programs, and/or the barriers that they face (Amaro et al. 2006; Choi 2005; Gardner 2005; Sanner and Wilson 2008). With respect to foreign language issues in medical education, one group has described the introduction of a training program within a medical school curriculum to deliver care in a second language (French) and its success in preparing physicians to work in this second language (Drouin and Jean 2002; Drouin and Rivet 2003). Nevertheless, our review of the literature in medical education did not reveal any published studies that specifically examine the impact of learners' use of a second language on the training and supervision process itself.

Turning to the fields of psychotherapy and counseling psychology, the central role of cultural competency in the counseling of clients of diverse backgrounds is well recognized. A body of research has focused on the development of multicultural counseling competencies among clinical learners, as well as on the development of skills in the clinical supervision of students in this area (Arthur and Collins 2009; Down 2000; Teasdale 2007). Exploring the influence of various individual factors on trainees' perceptions of competence in multicultural counseling supervision, Norton and Coleman (2003) analyzed the influence of race, Johnson (1997) analyzed race, gender, and racial identity, and Paul (2001) defined both constructive and biased practices in supervisor behaviors. Within the broad context of multicultural counseling supervision, however, the influence of the use of a second language on the perceptions and experiences of supervisors and trainees has received relatively little attention.

In a 2004 literature review, Fuertes found "virtually no conceptual or empirical research on the topic of bilingual supervision" (p.84). Aguirre et al. (2005) described the challenges of bilingual therapists in doing therapy in the less dominant language (Spanish or English) and how they perceived their level of competence, and Castaño et al. (2007) presented the challenges of therapists in providing mental health services in Spanish as a second language. Gamsie (2009) explored the extent to which therapists' personal experiences conducting therapy in their native tongue differ from those in their second language and the impact such differences can have on the therapeutic

relationship and on the therapist's professional identity and confidence. These authors focused on the experience of providing counseling from the therapist's perspective, and not on the experience of supervision, either from the supervisor's or student's perspective.

More recently, however, Verdinelli and Biever (2009) published the results of a qualitative study of the supervision experiences of bilingual (Spanish-English) graduate students. The participants reported feeling burdened and stressed by additional responsibilities and having little training to develop the language skills necessary to provide services competently in Spanish. The participants appreciated having supervisors who were culturally competent and open to the clients' cultural values. The authors concluded that training programs and supervisors need to be aware of the factors contributing to this stress and examine practices that may either exacerbate or reduce the burdens.

Purpose of the Study

With a continued focus on cultural awareness in the field of genetic counseling and on efforts to attract individuals from diverse backgrounds, we felt that the potential influence of undergoing training and supervision in another language on students' and supervisors' experiences in genetic counseling should be explored. The objective of this study was to address two questions: Does training, counseling and supervising in another language differ from performing those activities in one's first language? If there are differences, how could our knowledge of these be used to improve the training of bilingual students or English as a second language (ESL) students?

Methods

Participants and Procedures

A written questionnaire was distributed to participants through the Internet survey provider, SurveyMonkey® (www.surveymonkey.com). The questionnaire was available from January 11, 2008 to February 29, 2008 and was open to genetic counseling students and current and former genetic counselors. The 227 then-members of the Canadian Association of Genetic Counselors (CAGC) received an email invitation to participate. Members of the National Society of Genetic Counselors were invited to participate using the society's email list-serve, which had roughly 2100 subscribers when the survey invitation was distributed. Invitations were also sent to the Association of Genetic Counseling Program Directors, so that the members might distribute the invitation to their students. Completion of the

questionnaire was completely voluntary and respondents implied consent upon answering the questions. The study was approved by the McGill University Institutional Review Board.

Instrumentation

In order to refine the original research questions, the first author conducted two focus groups and two interviews involving former and/or current bilingual genetic counseling students and current or former multilingual genetic counselor supervisors. The aim was to elicit other potentially important issues that are present when another language is introduced into genetic counseling training and supervision. The themes that emerged from the focus groups and interviews were used in the development of a written questionnaire. The questionnaire consisted of both open and closed-ended questions. Aside from questions assessing respondents' spoken language abilities and their proficiencies in these languages, the region in which they lived and the specific type of work they performed, no demographic information was gathered. Closed-ended questions were used to determine the number of respondents who had experienced specific situations and they were often asked to elaborate on those experiences.

The 67-item questionnaire was divided into three sections. Using skip-logic, participants were only asked to complete those sections relevant to their experiences. "Purpose of the Study" consisted of questions for current genetic counseling students and these respondents completed 6 to 21 questions, the actual number being dependent on the number of languages the student spoke and their training experience thus far. "Methods", consisting of 16–21 questions, was completed by genetic counselors who, during their time as genetic counseling students, encountered sessions where they spoke another language. Items in these two sections asked respondents to elaborate on their experiences when they participated in genetic counseling sessions, defined as sessions in which the student had an active role. Ten to 19 questions in "Results" sought to gather information from genetic counselors with experience in supervising bilingual students. Bilingual respondents who had both supervised bilingual students and who had used another language during their own training were asked to complete sections 2 and 3 of the questionnaire, resulting in up to 31 questions being completed by this group.

Data Analysis

Descriptive statistics (means, standard deviations, and percentages) were calculated for many of the closed-ended questions. Fisher's exact test was used to determine whether responses from sections 1 and 2, the current and former students' responses, could be combined and analyzed as

one set reflecting an overall “student experience”. The independent one-sample *t*-test and a Bonferroni correction of $p < .001$ to control for family-wise error were used to determine whether there were any significant differences with regards to certain activities and experiences when a session was performed in one’s first language versus their second language.

Qualitative data were analyzed using a modified version of Hill’s Consensual Qualitative Research (CQR) method (Hill et al. 1997; Hill et al. 2005). This method shares approaches with a number of qualitative analysis methods, most particularly *grounded theory*, which uses an approach to data coding that allows the data to guide the construction of the particular themes, as opposed to the researchers applying their own hypotheses to the data (Strauss and Corbin 1990). In Hill et al.’s (1997) description of CQR as compared to other qualitative methods such as comprehensive process analysis (CPA), the authors explain that CQR stays closer to the explicit level of meaning of participant statements rather than interpreting the implicit meaning of events.

There are three main steps to the CQR method: 1) responses are divided into broad topic areas or *domains*; 2) responses are then summarized/paraphrased into *core ideas*, which capture the meaning behind the response and put the statement in context with its particular question; and 3) core ideas are then organized into *categories* within their assigned domain. A key component of CQR is the consensus process. This method of analysis requires team members to individually analyze the data and agree on how the data are finally classified.

In this study, the first and fourth authors acted as the “analysis” team members and individually organized the responses into domains. Next, extensive discussion between the two team members occurred to achieve consensus regarding domain organization. The same response could be assigned to more than one domain, if the response described more than one theme. Once the data were assigned to domains, the first author constructed core ideas for each response in the context of the posed questions and the particular individual who responded (i.e. student or genetic counselor). The second team member then reviewed all core ideas to ensure the meaning of the response was adequately captured. The domains and core ideas were then given to the data auditor, the second author, for review. The three team members then met to discuss the auditor’s comments and a final consensus was reached. Grouping the core ideas into categories, was performed by the first author and reviewed by the fourth author. Core ideas were categorized based on their general theme (e.g. advanced genetic counseling skills). A specific category could include core ideas that reflect the positive, negative or neutral aspects of that theme (e.g. responses that describe difficulties with advanced

genetic counseling skill and those that describe an improvement in their skills). Once this step was complete, consensus was again reached regarding the proper categorization of the data. The categorized data were given to the auditor for review. Consensus was once again reached with regards to the final categorization of the data.

Results

Sample Characteristics

Of the 265 respondents who began the questionnaire, 230 (87 %) completed it; however, all responses were used in data analysis regardless of questionnaire completion. Those who did not complete the survey typically stopped prior to the open-ended questions. An estimated 2740 invitations to participate were sent through the CAGC mailing list (227 subscribers), the NSGC listserv (approximately 2100 subscribers) and the Association of Genetic Counseling Program Directors (to reach 414 students); however, many people subscribe to more than one of these sources. Based on these numbers, we achieved a conservative estimated response rate of approximately 10 %. Of the 265 respondents, 137 (52 %) were genetic counselors who regularly interact with patients, 14 (5 %) were genetic counselors who do not regularly interact with patients and 8 (3 %) were individuals not currently working as genetic counselors, but who had undergone genetic counseling training. One hundred-seven respondents indicated they had supervised genetic counseling students. One hundred-six (40 %) of the respondents were current genetic counseling students; 45 (42 %) were in their first year, 58 (55 %) were in their second year, and 2 (2 %) were in their third year of training.

Language Proficiency

Overall, 190 (72 %) of the respondents spoke two or more languages (Range: 2–6). Table 1 lists the 37 languages which respondents reported being able to speak, albeit at varying skill levels. The most prevalent first and second languages were English, French, and Spanish. Language proficiency was self-reported; respondents were asked to choose from definitions describing varying levels of language proficiency taken from the “language testing scale” developed by the Foreign Affairs and International Trade Department of the Government of Canada (2008). The overall average reported level of proficiency of an individual’s first language was equivalent to that of an “educated native,” meaning they were functionally equivalent to that of a highly articulate and well-educated native speaker. The average language proficiency rating of the second and third spoken languages was approximately that of someone with a “limited

Table 1 Languages spoken by questionnaire respondents ($N=257$)

Language	1st Language <i>n</i>	2nd Language <i>n</i>	3rd Language <i>n</i>	4th Language <i>n</i>	5th Language <i>n</i>	6th Language <i>n</i>	Total <i>n</i>
English	212	24	1	–	–	–	237
French	13	59	8	–	1	–	81
Spanish	4	57	18	1	–	–	80
German	–	6	2	–	–	–	8
American Sign Language	–	3	1	1	–	1	6
Italian	–	3	2	1	–	–	6

Languages spoken by fewer than 6 respondents are: Albanian, Arabic, Cantonese, Czech, Danish, Dutch, Farsi, Greek, Gujarati, Hebrew, Hindi, Japanese, Kannada, Lao, Latvian, Malay/Indonesian, Mandarin, Maori, Polish, Portuguese, Punjabi, Russian, Slovakian, Serbo-Croatian, Swahili, Swedish, Tamil, Thai, Turkish, Ukrainian, and Urdu

working proficiency.” The definition of limited working proficiency is being able to satisfy routine social demands and limited work requirements. Of note, approximately 10 % of the respondents indicated that English was their second or third language.

Quantitative Analysis of Students’ Responses to Closed-Ended Questions

Students’ Responses

“Purpose of the Study” and “Methods” of the questionnaire sought to elicit the experiences of current and former bilingual genetic counseling students. A Fisher’s exact test was used to determine whether responses from these two respondent groups could be combined to analyze as one group; no significant difference was obtained between the two response sets and the data were combined. Table 2 presents a summary of responses to closed-ended questions by the 186 former and current students who responded to the survey. Half of the respondents ($n=93$) indicated they had participated in supervision involving their second language, with 22 individuals indicating that their entire genetic counseling training experience occurred in their second language. The table also shows the percentage of students who felt that the supervision experience differed when another language was involved.

In order to elicit the aspects of training and counseling that differed when another language was involved, students were asked to evaluate whether various aspects of a counseling session were the same level of difficulty when the role was performed in their second language, as compared to the same situation in sessions that occurred in their first language. These items were rated using a Likert scale (1 = the role was less difficult when performed in their second language, 3 = the same level of difficulty as the role being performed in their first language, 5 = performing the role in one’s second language was more difficult). We tested the

null hypothesis that sessions would be the same level of difficulty in a second language as compared to sessions in one’s first language ($M=3.00$). As shown in Table 3, all aspects of counseling sessions when performed employing another language had a greater mean level of difficulty. By employing an independent one-sample *t*-test, we found that the increase in difficulty was statistically significant ($p<0.001$, two-tailed) for nine of the 12 aspects of a counseling session, even when controlling for family-wise error using the conservative Bonferroni correction. As such, we were able to reject the null hypothesis for all but three aspects of a session (building rapport with patients, performing risk assessment and presenting cases during meetings).

Students were also asked to indicate whether they experienced 18 different emotions with more, less or the same level of intensity when sessions occurred in their second language, as compared to sessions in their first language. The null hypothesis was that the level of emotional intensity does not differ depending on the language used in the session ($M=3.00$). As summarized in Table 4, mean ratings were greater than 3.00 for all but three emotions (*anger*, *relief*, and *sadness*). Using the independent one-sample *t*-test, the increase in intensity of the emotions when a student employed a second language during a session was statistically significant ($p<.001$, two-tailed) for 11 emotions: *inadequacy*, *nervousness*, *anxiety*, *stress*, *discomfort*, *confusion*, *worry*, *embarrassment*, *fear*, *fatigue* and *pride*. Therefore, the null hypothesis was rejected.

Quantitative Analysis of Supervisors’ Responses to Closed-Ended Questions

For “Results” of the questionnaire, 107 respondents indicated they had experience as supervisors. Their supervision experience varied from 1 to 28 years. Table 5 summarizes responses submitted by supervisors to the closed-ended questions. As shown in Table 5, 61 % ($n=65/107$) had supervised a bilingual/multilingual student, and half ($n=$

Table 2 Summary of student responses regarding training and supervision experiences when another language was employed

Question	Response	<i>n</i>	%
I have participated in sessions that have occurred in my second language.		186	
	Yes	93	50
	No	93	50
During counseling sessions using my second language, I find that supervision is _____ sessions that I perform in my first language.		77	
	The same as	45	58
	Different from	32	42
Overall, I found that using my second language during training and supervision _____ my training.		76	
	Helped	58	76
	Hindered	4	5
	Had no effect on	14	19
The majority of my genetic counseling training occurred in my first language.		134	
	Yes	112	84
	No	22	16
If no: I have had supervisors who speak the same first language as me.		22	
	Yes	11	50
	No	11	50
I have had supervisors who are able to speak my first language as their second language.		22	
	Yes	7	32
	No	15	68
When I share the same first language as my supervisor, I feel that the supervisor-student relationship is different from when I am supervised by someone who does not share my first language.		8	
	Yes	5	63
	No	3	37

Total *n*'s vary because not every respondent answered every question

53/107) had supervised a student who did not share their first language. Of those who had supervised a student whose native language differed from their own ($n=47$), 12 indicated that the supervisor-student relationship was different when compared to relationships with student with the same mother tongue. Some of these responses were further elaborated on in response to the open-ended questions. Those findings are reported in the qualitative analysis section. Counselors who had supervised bilingual students were asked whether aspects of a counseling session differed when a student counseled a session in another language. About half ($n=23/48$) indicated that there were differences; these differences are reported in more detail in the qualitative analysis section.

Qualitative Analysis

As previously described, open-ended questions were analyzed using the CQR method. Responses were classified

into domains, core ideas, and categories using this method. The same response could be placed in more than one domain, and a core idea could be placed into more than one category within the domain. The analysis yielded 7 domains and 37 categories, shown in Table 6 along with frequencies of responses. Not all of these are discussed herein as they are adequately captured in the quantitative results (domain VI) or are less relevant to the major research questions (domain VII).

Domain I: Development of Genetic Counseling Skills

One of the more common themes that emerged from responses was how the introduction of another language into counseling sessions and training altered the student's ability to use and improve genetic counseling skills. Overall, there were 196 responses within six categories that described the different ways in which language impacted the

Table 3 Students' ratings of level of difficulty of components of counseling when another language was employed in sessions

Component (n)	M	SD	<i>p</i> <	<i>n</i>
Addressing psychosocial issues	4.14	1.06	.001	73
Educating with regards to diagnosis, inheritance, risk and testing options	3.83	0.88	.001	73
Discussing positive test results	3.83	0.87	.001	65
Discussing negative test results	3.64	0.88	.001	64
Preparing cases	3.61	0.98	.001	70
Eliciting medical and family histories	3.54	0.82	.001	76
Identifying patient resources and referrals	3.47	0.99	.001	73
Contracting	3.43	0.87	.001	72
Building rapport with patient	3.40	1.23	.006*	74
Writing chart notes and follow-up letters	3.37	0.83	.001	71
Performing a risk assessment	3.23	0.77	.01*	74
Presenting cases during meetings	3.18	0.65	.02*	68

Items were rated on a scale of 1 to 5, where 1 = the role was less difficult when performed in their second language, 3 = the same level of difficulty as the role being performed in their first language, and 5 = performing the role in one's second language was more difficult

*Although we achieved a value of $p < .05$, when taking into account the Bonferroni correction, the increase in difficulty does not reach the level of statistical significance

Table 4 Students' ratings of level of emotional intensity they experienced when another language was employed in counseling sessions

Emotion	M	SD	<i>p</i> <	<i>n</i>
Inadequacy	4.07	0.70	.001	68
Nervousness	4.04	0.71	.001	75
Anxiety	4.03	0.93	.001	70
Stress	3.84	0.72	.001	74
Discomfort	3.71	0.85	.001	75
Confusion	3.70	0.62	.001	73
Worry	3.59	0.67	.001	71
Embarrassment	3.59	0.76	.001	66
Fear	3.52	0.68	.001	69
Fatigue	3.44	0.77	.001	71
Pride	3.42	0.91	.001	66
Panic	3.32	0.78	.002*	57
Happiness	3.16	0.78	.07	74
Compassion	3.11	0.83	.27	75
Guilt	3.10	0.62	.30	59
Anger	3.00	0.58	1.00	49
Relief	2.94	0.77	.52	65
Sadness	2.94	0.51	.32	62

Items were rated on a scale of 1 to 5, where 1 = emotion was felt with less intensity in a session where one's second language was employed versus their first language, 3 = emotion was felt with the same level of intensity when a session where one's second language was employed versus their first language, and 5 = emotion was felt with more intensity in a session where one's second language was employed versus their first language

*Although we achieved a value of $p < .05$, when taking into account the Bonferroni correction, the increase in emotional intensity does not reach the level of statistical significance

student's ability to acquire genetic counseling skills. Table 7 summarizes the responses that were assigned to this domain.

Throughout the questionnaire, many students described being preoccupied with vocabulary, terminology and choosing the correct word during those sessions that occurred in another language. Forty-six responses described situations where the student's main focus was on the use and choice of words. Many students described being unfamiliar with the proper medical and genetics terminology in their second language: "I found I needed to do a bit more prep work to think of words pertinent to genetic counseling like grief, mourning, etc...." A few of the supervisors also described situations where the student's choice of words was not always accurate or sensitive. Conversely, not all of the responses in this category described problems with regards to vocabulary. Many students described the opportunity to learn genetic and medical terminology in their second language as a positive experience.

Many responses in the above category described a focus on vocabulary, which led to the student failing to notice or address non-verbal signs and psychosocial issues during the session. Another category was created to group the responses that addressed issues pertaining to attaining and practicing these advanced techniques. Most of the 38 responses in this category described situations where speaking another language resulted in less attention being given to psychosocial issues, a decreased ability to express or capture the nuances of the conversation, and a lessened ability to read non-verbal signs. One student wrote "I found that I had more difficulties in picking up on verbal or even physical cues and, therefore, the psychosocial aspect of the sessions were less developed." A few respondents described how

Table 5 Summary of supervisor responses to closed-ended questions regarding their experiences supervising when another language was employed

Question	Response	<i>n</i>	%
During my career as a genetic counselor, I have supervised genetic counseling students.		148	
	Yes	107	72
	No	41	28
If yes: I have supervised bilingual or multilingual genetic counseling students.		107	
	Yes	65	61
	No	42	39
I have been in a situation where my student speaks the language of the counseling session better than I do.		68	
	Yes	40	59
	No	28	41
I find that when I am supervising students who are counseling in their second language, certain aspects of the session are altered in comparison to sessions they counsel using their first language.		48	
	Yes	23	48
	No	25	52
I have supervised students who do not share my first language.		107	
	Yes	53	50
	No	54	50
If yes: When supervising students who do not speak the same first language as me, I have found that the supervisor-student relationship is different when compared to the relationship I have with students who share my first language.		47	
	Yes	12	25
	No	35	75

Total *n*'s vary because not every respondent answered every question

their overall training was hindered by the introduction of another language, as they were unable to develop the necessary advanced counseling skills: "... I was unable to improve my more advanced genetic counseling skills, such as providing psychosocial support, as I was not proficient enough." On the other hand, some described that their attentiveness to non-verbal cues was improved in sessions in their second language because they were less able to identify verbal cues, and thus became more sensitive to the patients' behavior: "I was more attentive to the physical emotions of patients."

Along with difficulties in mastering more advanced genetic counseling skills, 37 responses described difficulties in the development of basic skills, including educating patients, explaining concepts, ensuring patient understanding, and writing letters and chart notes. Responses were categorized herein if they described skills specific to genetic counseling. Students described situations where they feared they were unable to convey the proper information to the patient; a number of responses described an inability to explain a concept in more than one way if the patient didn't understand the original explanation: "I only had one way that I was able to state something or ask a question." The

majority of supervisors who commented on a student's basic skills described difficulties with the student's written language and their choice of words: "There were issues with regards to her writing and issues with regards to word choice. She had more difficulty...determining what words may be too complicated for patients to understand."

Another theme that emerged was a sense of professional and personal growth due to the bilingual training experience. Thirty-one responses were grouped in this category and detailed how the experience was rewarding, despite some of the associated difficulties. Many students indicated the overall experience was positive and it allowed them to find alternate ways to approach counseling. One student wrote, "It allowed me to think differently and counsel differently, essentially giving me more tools with which to work."

Twenty-three responses described that counseling in a second language helped to enhance the student's cultural competencies and multicultural skills. Many students responded that being able to work with individuals from different cultures was a positive, interesting experience: "I recognized many of the joys and difficulties of working with a multicultural population." A few of the responding

Table 6 Domains and categories for responses to open-ended questionnaire items

Domain	Category	# of Responses ^a
I. Development of genetic counseling skills	i. Student's word choice: one's focus is on vocabulary and terminology	46
	ii. Advanced genetic counseling skills: catching nuances, non-verbal behavior, psychosocial counseling, etc.	38
	iii. Basic genetic counseling skills: explaining concepts, educating, patient understanding, letter writing, chart noting, etc.	37
	iv. Professional and personal growth	31
	v. Genetic counseling skills: cultural competencies	23
	vi. The extra effort: more time and work required	21
II. Impact of a 2nd language on the supervisory process	i. Supervision is unchanged	39
	ii. Increased supervisory support	30
	iii. Limits in supervision: Supervisor cannot assess skills	22
	iv. Changing roles: altering the student-supervisor dynamic	20
	v. Communication issues between student and supervisor	13
	vi. The struggling student: Is the problem the language or their ability?	11
	vii. Atypical feedback: Increased criticism and comments regarding language ability	8
	viii. Lower expectations regarding student skills	7
III. Specific effects of 2nd language proficiency in genetic counseling training and supervision	i. The impact of a second language on communicating and counseling during sessions	52
	ii. When student and supervisor have differing language proficiency—the impact on supervision	43
	iii. Undergoing all of one's genetic counseling training in a second language	17
	iv. Improving one's language abilities	13
IV. Descriptions of patient's experience: respondent's perceptions	i. The counselor-counselee connection: building or not building rapport	43
	ii. Providing good service and ensuring patient comfort	30
	iii. The patient's appreciation of second language use	22
	iv. The patient's understanding	14
	v. The overall benefits and detriments to second language use	9
V. Overall effect of another language on training and supervision: Qualitative descriptors (QDs) of the experience	i. Positive QDs of counseling and the supervisory process	32
	ii. Neutral QDs of counseling and the supervisory process	27
	iii. Negative QDs of counseling and the supervisory process	24
	iv. QDs of the training experience	13
	v. Other	6
VI. Reported emotions during training and supervision	i. Student-felt emotions: negative	157
	ii. Student-felt emotions: positive	87
	iii. Supervisor-felt emotions: negative	51
	iv. Supervisor-felt emotions: positive	27
VII. Help needed: The use of language interpreters	i. The general use and requirement of an interpreter	15
	ii. The student's knowledge of a second language was helpful in sessions where an interpreter was present	9
	iii. The impact of interpreters on the session	8
	iv. Speaking the patient's language is better than using an interpreter	6
	v. The impact of the language barrier and the need for an interpreter	6

^a Responses were often classified into more than one domain or category

supervisors, however, described situations where their students struggled with a cultural barrier, as well as the language barrier, which affected how well the student connected with the patient.

Finally, 21 responses referred to the extra time and effort required to counsel in one's second language. Respondents indicated there is an increased amount of work required to prepare and manage a case in another language: "More time

Table 7 Summary of Domains I through IV

Categories	<i>n</i> ^a	Response – Core Idea
Domain I: Development of genetic counseling skills		
Student's word choice: one's focus is on vocabulary and terminology	46	St: A negative aspect of counseling in my second language was that I would sometimes have problems finding the right expression or word.
Advanced genetic counseling skills: catching nuances, non-verbal behavior, psychosocial counseling, etc.	38	St: A negative aspect of counseling in my second language was that it was an extra barrier to developing psychosocial skills.
Basic genetic counseling skills: explaining concepts, educating, patient understanding, letter writing, chart noting, etc.	37	GC: When a student is counseling in their second language, complicated concepts are not as clear and the student cannot tell when they are being misunderstood
Professional and personal growth	31	St: Using my second language is helping my training because it has allowed for personal growth and gaining confidence.
Genetic counseling skills: cultural competencies	23	St: Using my second language is helping my training because I am more aware of cultural issues and can incorporate that into my counseling.
The extra effort: more time and work required	21	St: It is more time-consuming than sessions in my first language.
Domain II: Impact of a second language on the supervisory process		
Supervision is unchanged	39	GC: Supervising a student who is counseling in my second language is no different than when they are counseling in my first language.
Increased supervisory support	30	St: A positive aspect of counseling in my second language was that my supervisor was patient and supportive.
Limits in supervision: Supervisor cannot assess skills	22	St: Supervision was different because the supervisor did not speak my second language; therefore, supervision was not as effective.
Changing roles: altering the student-supervisor dynamic	20	GC: Sessions where the student speaks the patient's language and I did not...she had to translate to me what she communicated to the patient and I feel that it puts the student in an uncomfortable position.
Communication issues between student and supervisor	13	GC: The student-supervisor relationship is different when the student does not share my first language as it is more difficult to discuss the intricacies of the case...
The struggling student: Is the problem the language or their ability	11	GC: When a student is counseling in their second language, as a supervisor, I have to try and determine what errors are language based and which ones are counseling skill based. This is not always immediately evident.
Atypical feedback: Increased criticism and comments regarding language ability	8	St: When I was beginning to counsel in my non-native language, supervisors not only focused on the content exchange, but also the narrative.
Domain III: Specific effects of second language proficiency in genetic counseling training and supervision		
The impact of a second language on communicating and counseling during sessions	52	St:...I was not able to communicate the same subtleties that I can in my first language and this would sometimes distract me during the session
When student and supervisor have differing language proficiency—the impact on supervision	43	St: I found that some of my supervisors... were not as fluent as they thought themselves to be and this gave me confidence, but also made me nervous.
Undergoing all of one's genetic counseling training in a 2nd language	17	St: I never thought it would be such a challenge to learn and train in my 2nd language. I think it is even more difficult in a medical profession where you cannot make mistakes or develop yourself at your own pace
Domain IV: Descriptions of patients' experience: respondents' perceptions		
The counselor-counselee connection: building or not building rapport	43	St: A negative aspect of counseling in my second language was not being able connect with patients.
Providing good service and ensuring patient comfort	30	St: It was rewarding to feel like I could help people in the language in which they are most comfortable
The patient's appreciation of second language use	22	St: A positive aspect of counseling in my second language was the appreciative way the clients treated me for communicating in their primary language
The patient's understanding	14	St: I was initially worried that parents wouldn't understand my accent

^a Represents number of responses

St student; GC genetic counseling supervisor

is required for writing letters and reading articles.” Many described how counseling sessions themselves took more time when they occurred in their second language: “When I counseled in my second language, I was exhausted, as sessions were longer because I had to translate back to the supervisor.”

Domain II: Impact of a Second Language on the Supervisory Process

There were 150 responses describing the experience of student supervision. Seven of the eight categories are discussed next, and summarized in Table 7. In this domain, we describe the impact of the introduction of another language on the supervisor-student relationship, the quality and amount of supervisors’ feedback, and how students and supervisors feel about supervision under these circumstances.

Of the 150 responses, 39 stated the introduction of another language did not alter the supervisory experience. Many indicated that if a student spoke English as a second language, their language proficiency was high, and so it was not considered a concern. There were also situations in which the student and supervisor had the same proficiency in the second language, and therefore language did not alter supervision. Roughly three quarters of the responses in this category were described by supervisors; fewer students expressed that the introduction of another language did little to alter the supervisory experience.

Thirty responses described an increase in the amount of support given to students by supervisors when another language was used. This support ranged from the supervisor feeling comfortable with their student attempting to counsel in another language, to some supervisors expressing special interest in training students to be bilingual counselors. There were also many student respondents who commented that supervisors offered encouragement and empathized with the student’s situation: “I did have one supervisor who was very supportive and encouraging and helped me solidify my confidence in my second language. That was an amazing experience.” Students who shared a first language other than English with a supervisor described an increase in understanding from that supervisor: “I guess it is the experience of having studied in another language that gives the supervisor a better understanding of the kind of difficulties a student can face.” Supervisors varied in their responses; however, many indicated that their reactions in these particular situations depend on the level of skill of the particular student: “Depending on the capabilities of the student, I can range from feeling fully comfortable to having some concern.”

Another category, containing 22 responses, described situations where, because the supervisor did not speak the language of the session, there was limited supervision and supervisors were less able to assess the students’ abilities. The majority of these responses came from students, who indicated that the

supervisor was unable to offer feedback, gauge success, or offer help with determining appropriate word usage. One student, whose first language was not English, found that when she counseled in her first language, “I had limited supervision since the supervisors did not know the language. They relied on my presentation of the cases and their own observation of my interaction and rapport with the patient.”

Twenty responses described an alteration to the student-supervisor dynamic when another language was introduced into supervision. A few of the students mentioned an increased reliance on their supervisor in these situations. Others described circumstances where the other language caused a negative shift in the supervisory relationship. One response described the dynamic as being too friendly and having a negative effect on her overall training: “Supervision was not as rigorous for me as it was for my classmates... I felt the supervisor became more dependent on me and my language skills. It was more of a collegial relationship, as opposed to a student-supervisor relationship.” A few supervisors also described situations in which they supervised a student who spoke the patient’s language better than they did, and this changed how they viewed themselves in the relationship. For example, “I feel a bit less self-assured or in charge” and, “When a student is counseling in their second language, I am not as much the authority figure.”

Thirteen responses described issues of communication between the student and supervisor when the two did not share the same first language. Two students described difficulties being understood by their supervisors. Supervisors described difficulties between themselves and the students with regards to capturing nuances and that an additional effort was required to ensure they understood each other.

Another category pertaining to student evaluation and feedback contained 11 responses. These described situations where the supervisor had problems determining whether a student’s difficulties were due to their language abilities, or whether they had more general issues with regards to counseling skills. For instance, “When a student is counseling in their second language, it is more difficult to assess psychosocial and communication skills because I am never sure whether it is a language issue or if it’s an actual lack of thought in terms of the counseling itself” and, “The student may exhibit weaknesses that would not be evident if they were counseling in their first language.”

A related category contains 8 responses concerning supervisors giving feedback on the student’s language skills, in addition to typical feedback given after a counseling session. One supervisor reported, “It is challenging, as a supervisor, not to focus on the language difficulty. I try to choose a few language points for her to work on but not neglect feedback on the counseling case itself.” One supervisor expressed uncertainty about whether correcting the student’s language abilities was part of her responsibilities.

Domain III: Specific Effects of Second Language Proficiency in Genetic Counseling Training and Supervision

A number of responses described ways in which one's language ability or level of proficiency could affect counseling, training and supervision. Table 7 summarizes the three most descriptive and relevant categories assigned to this domain. Fifty-two responses were assigned to a category concerning the overall impact another language had on patient communication and the act of counseling during sessions. Many responses described difficulties when the student's proficiency in the patient's language was not advanced enough to provide adequate counseling. As one student commented, "I couldn't find the right way to say something in [my second language]; it was frustrating because I knew I could say it better in my first language." These sentiments were corroborated by a few supervisors: "When students are counseling in their second language, they are much more tentative to try new things because of the limitations that the language places on them..." Many of the student respondents described these situations as frustrating, difficult and embarrassing. Not all respondents, however, considered the other language a barrier. One student wrote "...communication is more about listening and less about how eloquently one can communicate." A supervisor also indicated that "...students feel much more successful and/or that their work is more meaningful, because they are able to provide a productive counseling session and do it in their second language".

Forty-three responses described the impact on supervision when the level of language proficiency between the supervisor and the student differed. In some situations, where students had more advanced language skills, the student was used as a translator in order to help the supervisor. Other situations were described in which, according to the student, their supervisor was not as proficient in the language as the supervisor thought: "I found it difficult to tell supervisors...that they misinterpreted what the patient said." Some comments that specifically addressed how this language discrepancy created discomfort in the supervisor-student relationship: "I was able to assist my supervisor when the patient did not understand, but it was equally negative as it could sometimes make things uncomfortable in the training hierarchy." There were also accounts from supervisors of supervising students who spoke English with varying degrees of proficiency. They described these situations as *challenging* and *frustrating*. Conversely, there were also comments from supervisors saying that the opportunity to counsel with a student who had a higher language proficiency was a positive experience and a chance to learn new ways in which to interact and communicate with the patient in that language: "...I was able to learn new vocabulary and new ways of saying things." Some of these respondents also

expressed gratitude towards the student who interpreted the session for them.

Lastly, 17 comments provided an overall assessment of undergoing all of one's genetic counseling training in a second language. A few responses in this category came from individuals who had very few difficulties with training in a second language, but the majority expressed surprise that training in their second language was so difficult. For example, "... it is difficult to share your thoughts with your supervisor in a field like genetic counseling, where you have to be really precise with the words you use, both orally and in writing. Sometimes my supervisors did not correctly interpret my thoughts..."

Domain IV: Descriptions of Patients' Experience: Respondents' Perceptions

There were 118 responses describing the patient's feelings and experience, as perceived by the student or supervisor, when a session occurred in a student's second language. These responses were divided into five categories. The four categories that best capture respondents' specific perceptions are summarized next and in Table 7.

Building rapport and making a connection with the patient was a common theme; 43 responses spoke of this connection. Some mentioned the difficulties in building rapport with the patient when the session occurred in the student's second language. A few supervisors indicated that some students, both those who spoke English as a second language and those whose second language was something other than English, had a difficult time making a connection with patients due to the linguistic and cultural barriers. Despite these examples, the majority of responses referred to an increased rapport or deeper connection with the patients: "...I automatically developed rapport with my patient." Increased rapport was often cited by students and by supervisors as a positive aspect of counseling in a second language.

Thirty responses described how speaking in the patient's language contributed to the patient's overall comfort during the session or had an impact on the provision of good service: "I gained a closer connection with patients because they were able to express themselves in the language that was easiest for them, which resulted in better patient care." Others described feeling empowered or found the situation rewarding. On the other hand, many respondents remarked that speaking the patient's language may have lessened the quality of care provided: "I was worried that I was doing a disservice to the patients, as I was unable to tackle the psychosocial concerns as well."

The third category contains 22 comments referring to patients' appreciation of the student counseling them in their native language. For instance: "Patients were generally very

grateful to be counseled in their first language and were encouraging of my efforts.” Many described patient appreciation as one of the more positive aspects of counseling in another language.

Fourteen responses concern how counseling in the patient’s language either positively or negatively affected the patient’s ability to understand the information discussed during the session. Many students mentioned feeling uncertain as to whether the patient understood what was being explained: “I couldn’t always understand the patient, and vice versa, and this would make me feel uncertain and awkward if I misinterpreted what was being said.” However, not all responses expressed concern, as some students felt the patients left the session well informed.

Domain V: Overall Effect of Another Language on Training and Supervision: Qualitative Descriptors (QDs) of the Experience

Throughout the questionnaire, many responses were, in essence, general descriptions of the respondents’ experiences participating in counseling sessions and supervision in another language. One hundred-twelve responses were classified as a descriptor of one of these experiences, and these were divided into five categories. For the purposes of this paper, however, only two are addressed. Excluded are categories describing generally vague or neutral sentiments about the experience.

The first category includes 32 responses describing how counseling and being supervised in one’s second language was a positive experience. Adjectives included *interesting*, *useful*, *fun*, *valuable* and *informative*. One respondent wrote, “I provided a service others could not provide,” and another expressed, “It is a privilege to counsel in a second language.” The second category contains 24 responses describing negative experiences when a second language was introduced into counseling sessions and supervisory situations. Adjectives included *challenging* and *difficult*. Insecurity was a common theme and can be exemplified by the following comments: “I was worried that I would appear unprofessional,” and “I felt like I should be able to speak more, but I was too afraid to dive in and go for it.” Other responses described a lack of support and availability of mentors able to speak the same second language, which made the experience more difficult.

Discussion

Two general themes emerged from the data generated in the present study: *Impact of another language on the supervisory process* and *Genetic counseling training and supervision when another language is involved: the overall student experience*. These two themes, which are discussed next, bring together

responses from all seven domains and their respective categories, as well as from a number of the closed-ended questions.

Impact of Another Language on the Supervisory Process

Live supervision is a key component in the development of the skills necessary to become a successful genetic counselor (McCarthy and LeRoy 1998) and it may be a challenging experience for both the student and the supervisor. The relationship between the genetic counseling student and the genetic counselor is similar to the student-teacher relationship in many health care professions. This relationship can be influenced by a variety of factors, including age and previous experience of the student, cultural differences and the amount of supervision training or experience of the supervisor (Hendrickson et al. 2002; McCarthy and LeRoy 1998; McIntosh et al. 2006). In this study, specific closed-ended questions attempted to elicit whether another language could alter this relationship. One question asked whether supervision was the same or different when a second language was involved, when compared to sessions that occurred in their first language. Forty-two percent ($n=32/77$) of student respondents indicated that the experience of supervision is different when a counseling session involves another language. Likewise, 48 % ($n=23/48$) of supervisor respondents indicated that aspects of the counseling session were different when a student was counseling in their second language. These responses suggest that the language in which a session is performed may be an additional factor that alters and/or complicates supervision and the student-supervisor relationship.

Emotional Effects

In this study, discrepancies between the student’s and supervisor’s language skills were found to have both positive and negative influences on supervision. Among the supervisors, many reported feeling grateful and happy that the patient could be counseled in their preferred language, and they expressed pride in their student. These findings are consistent with previously reported positive aspects of supervision [e.g., Hendrickson et al. (2002) article, in which supervisors who participated in their focus groups reported that supervision enhanced their counseling and supervising skills]. In our study, there were supervisors who described the improvement of their language skills as a positive aspect of supervising bilingual students.

On the other hand, a number of supervisor respondents described feeling nervous, inadequate, and anxious during sessions where their student was counseling in another language, especially if the student’s language proficiency was more advanced than their own. Some supervisors noted feeling as if they lost some of their own autonomy when

their student was more proficient in the patient's language. There were supervisors who described feeling less *in charge* and less *self-assured* when a student had more advanced language skills than themselves. There were also students who indicated they felt their supervisor appeared awkward, jealous or uncomfortable in these situations. This feeling of insecurity on the part of the supervisor suggests they may perceive a role-reversal with the student has occurred, and they may have a difficult time adjusting to this new dynamic. The supervisor may find that being less knowledgeable than their student alters their role of "teacher." If a supervisor feels insecure in his/her role, this may be detrimental to the supervisory relationship. Previous researchers have proposed that genetic counseling supervisors may feel anxious and insecure in the role of supervisor, possibly due to the lack of formal training with regards to how to provide supervision (Hendrickson et al. 2002; Lindh et al. 2003; McIntosh et al. 2006). The introduction of another language into supervision may add further to the supervisor's anxiety and insecurity and may impact their ability to give the same level of teaching and supervision as when they are supervising a unilingual student.

The Altered Supervisory Dynamic

An altered dynamic between students and supervisors was also noted by the students. Some reported that they became more reliant on their supervisor. This may suggest that these students are reverting back to a supervisory relationship more consistent with one from earlier in their training. Borders et al. (2006) argued that students may require more support earlier in their training due to increased feelings of anxiety. With the introduction of another language into a clinical rotation, some students may be taking a step backwards in their training. This would influence the skills the student is able to practice and what they are capable of accomplishing during the rotation.

Often students noted that they were asked to take on the role of interpreter or translator, which might also alter the relationship dynamic between the student and supervisor. Although some students described feeling useful in this context, the role of an interpreter can be stressful and frustrating (Bowen 2001). Due to the power structure in a student-supervisor relationship, a student may be not feel comfortable declining the role of interpreter. If a student feels uncomfortable in the role of interpreter, the increased anxiety may decrease the potential learning opportunities during their clinical rotation.

Assessment and Feedback Challenges

In addition to the issue of role reversal, both student and supervisor respondents suggested that assessing student

performance and giving feedback were problematic. A noted concern by supervisors was the difficulty assessing whether a student's struggles were due to their counseling abilities or due to language issues. Many were unsure of the type of feedback they should be giving their students, specifically with regards to oral and written language errors. Some students indicated that certain supervisors gave excessively critical feedback regarding their counseling skills, as well as in regards to their language abilities. There were additional descriptions of supervisors interrupting the student more frequently during sessions involving another language. Hendrickson et al. (2002) described how some supervisors had difficulties in knowing when to intervene when a student is counseling. The students that they interviewed indicated the way in which they received feedback from some supervisors was a limitation in the process of live supervision. They described problems with unbalanced and/or excessive feedback and supervisors who "lie and wait" for students to make errors. The responses with regards to supervisor feedback in the current study are not unique to sessions involving another language; however, these issues may occur more frequently in situations where another language is involved as it may be more difficult for supervisors to know when to intervene and the appropriate subject matter to critique (e.g. grammatical errors).

Increased Supervisory Support

On the positive side, the current findings also suggest that language may increase the support the supervisor provides for the student. Some students reported receiving increased support and encouragement from their supervisors when sessions occurred in their second language; this support positively affected their feelings about counseling in another language. These results suggest supervisors play a large role in how students feel about counseling in their second language; they can be a persuading or a dissuading factor in students' using their second language. Supervisory support may decrease student anxiety and allow them to practice improving their advanced counseling skills. Hendrickson et al. (2002) reported similar findings with regards to supervisor impact on student anxiety. They recommended supervisors normalize the student's anxiety to help them overcome these feelings, thereby permitting the student to work on more advanced genetic counseling skills. This support might be even more important when adding additional stressors, such as other languages, to the training experience.

Challenges to Communication

Finally, many supervisors described issues with regards to communicating with students in a language other than their native-tongue and noted these difficulties were more pronounced in situations where the student and supervisor

did not share the same first language. Twenty five percent ($n=12/47$) of the respondents who had supervised a student who did not share their first language felt they had a different relationship with these students compared with those students who shared their first language. Although this percentage represents a minority of respondents, these findings are important as students may have increased difficulties with clinical rotations, on top of what is already a challenging learning and training environment. Students who did not share the same first language as their supervisor also described communication difficulties and reported not always feeling understood or *on the same page* as their supervisor.

It can be hypothesized that if a student is unsure of what is expected of them, they may appear less skilled. As reported by Hendrickson et al. (2002), supervisors have increased difficulties when they supervise less-skilled students. Some of the responses in our study suggest that when a student is less skilled in the language used in the session, it may lead to more difficulties for both the supervisor and the student. The supervisor may construe the student's difficulties as indicating weaker counseling skills. Hendrickson et al. additionally posited that students might have difficulties correcting supervisors' misinterpretations of what they have done or said. The responses in this study suggest misinterpretations occur when another language is involved and may occur more frequently when a supervisor and student do not share the same first language. Further support for this idea is that approximately two thirds of students ($n=15$) who underwent their training in their second language and who shared their first language with their supervisor felt the relationship with this supervisor differed in comparison to the other; they reported feeling better understood and more comfortable.

The Overall Student Experience

Overall, student respondents described many differences in their training when another language was used compared to when only their first language was involved. This was especially noted in the closed-ended question asking students to rate whether the different aspects of a counseling session were more or less difficult when a session occurred in another language. There was a statistically significant ($p < 0.001$) increase in the level of difficulty of all but three aspects of a genetic counseling session. Most notably, addressing psychosocial issues, educating the patient with regard to diagnosis, inheritance patterns, risk and testing options, and discussing both positive and negative genetic test results had the highest mean rankings with regards to level of difficulty when performed in another language. As well, a large number of the open-ended responses described students' difficulties with advanced genetic counseling skills, such as assessing non-verbal behavior and addressing psychosocial issues. A common complaint from student

respondents referred to their limited repertoire of medical and genetics terminology. Many indicated this made attending to the patient and being attentive to non-verbal behavior more difficult, as so much cognitive energy was being used to assess the appropriateness of their words. It can be hypothesized that this inability to acquire and practice advanced counseling skills may negatively affect a student's overall training and their ability to gain the confidence needed to feel comfortable counseling independently. The data also suggest these difficulties may be more pronounced for students undergoing all of their training in their second language (English), without previous experience in an English language education system.

One closed-ended question asked students to rate whether they experienced particular emotions with more or less intensity when a session occurred in their second language. There was a statistically significant ($p < 0.001$) increase in intensity of *inadequacy, nervousness, anxiety, stress, discomfort, confusion, worry, embarrassment, fear, fatigue, and pride*. Many of these emotions were also expressed in response to the open-ended questions. Recently, Jungbluth et al. (2011) examined the levels of stress and anxiety genetic counseling graduate students experience while undergoing training; however they did not look specifically at the supervision process. Their results showed that the overall levels of trait and state anxiety among genetic counseling student were significantly higher when compared to comparable samples. Borders et al. (2006) and Hendrickson et al. (2002) evaluated the impact of live supervision in genetic counseling training and found that students often feel anxious during counseling sessions, especially when attempting new or more advanced skills. Borders et al. (2006) reported that anxiety is especially prevalent in the student's initial rotations and can negatively affect their ability to attend to the patient and damage the process of supervision. Weil and Mittman (1993) described how students may feel frustrated, angry or inadequate when attempting to communicate with a patient of a different ethno-cultural background. Although the emotions reported in our study are not specific to sessions counseled in one's second language, the data collected suggest they may be more intense and/or prevalent if a session occurs in another language. Thus, the language of the counseling session may be additional stressor in an already anxiety provoking situation. If this is true, the increased level of anxiety may affect the bilingual student's ability to take advantage of the positive aspects of counseling in another language, including, but not limited to, the experience of counseling an individual from another culture.

Study Limitations and Research Recommendations

An overall response rate of 10 % was achieved, and while this is likely an underestimate, it is a low rate considering

the number of individuals who received an invitation to participate. As well, an ascertainment bias is likely present, as bilingual individuals may have been more likely to complete a questionnaire regarding the influence of language on genetic counseling training and supervision. Unilingual supervisors may have been less likely to participate, despite having supervised bilingual students. These unilingual respondents may have a different point of view from bilingual supervisors, which may not have been adequately captured in this study.

Only 22 respondents reported undergoing their entire genetic counseling training program in their second language. Future studies might attempt to further elicit the experiences of these students, in order to assess whether there are specific issues more frequent among this unique student population. In addition, a small number of respondents indicated that, although their first language was not English, they now had a higher proficiency in English than their native language. The questionnaire was built with the assumption that an individual had the highest proficiency in their native language, but at least five respondents had a higher proficiency in one of their non-native languages. Thus, this assumption may have resulted in some confounding responses.

The amount of experience a respondent had in terms of time in training or as a supervisor may have also influenced their responses. Approximately 40 % of the student respondents were in their first year of training and may have had limited experience with supervision and counseling in general. This may have resulted in proportionally more negative accounts about the experience, as previous studies have reported increased levels of anxiety earlier in a student's training (Borders et al. 2006). Other studies (Hendrickson et al. 2002; Lindh et al. 2003; McIntosh et al. 2006), have shown that supervisors may have increased anxiety due to a lack of formal supervision training; thus, supervisors in our study who had less training, support and/or experience may have expressed more negative opinions of supervision with a second language. In this study, one third of the counselors who had supervised bilingual counseling students had 3 years or less of supervisory experience.

While data were collected from both students and supervisors regarding their individual experiences when training and supervision involves a second language, the responses from the two groups were analyzed together. Since this was an exploratory study whose goal was to elicit whether training, counseling and supervising differed when another language is introduced to a genetic counseling session, the data analysis did not seek to determine whether supervisors and students perceive these raised issues similarly or differently. Future studies are necessary to determine whether these two groups have the same concerns when a second language is introduced.

A final limitation to this study is that, because little demographic information was collected, it is not known whether the given responses were affected by a respondent's geographical location (i.e. city and/or country) or a particular program at which the student trained. Some training programs have a clear expectation that students counsel in a second language, and these respondents may have different experiences from those for whom counseling in another language is not compulsory. As well, none of the questions took into account whether, or in what way, the patient's, student's or supervisor's culture may have had an impact on their experience. Since culture and language are often linked, this study was not able to determine of the extent to which the respondents' overall culture affected their responses.

Implications for Training

The findings of this study may be used to raise awareness among genetic counseling training programs of the needs of multilingual genetic counseling students and of possible issues genetic counseling students and supervisors might face when another language is involved in supervision and training. Understanding the many ways in which training and counseling in a second language differ from training and counseling in one's first language could aid in the development of strategies for addressing the challenges of training bilingual or ESL students. Eventually, the initiatives that genetic counseling programs put into place may facilitate the recruitment of bilingual or ESL students and thus potentially aid in the diversification of the field.

Cultural competence is heavily emphasized in today's genetic counseling training program curricula and many respondents in this study described the positive impact counseling in another language had upon their multicultural training experience. Training programs and supervisors, therefore, might consider initiatives to decrease the negative aspects of the experience and increase the positive. First, steps might be taken to decrease negative student emotions, such as anxiety and nervousness. As Hendrickson et al. (2002) suggested, supervisors might attempt to normalize feelings of anxiety for the student, which may help to foster a more positive experience during their rotation and encourage them to pursue bilingual counseling opportunities. Students in our study described how having a supportive supervisor improved their bilingual counseling experiences. Some also noted that acting as an interpreter increased their stress; therefore, a supervisor should ensure that the student is sufficiently comfortable and proficient in the patient's language before asking them to perform this role. In regions where it is common for students to act as interpreters, programs may consider providing students with the appropriate training so that they feel better prepared to act in this role.

Programs may also consider organizing student support workshops, so that students have the opportunity to openly discuss their feelings and problems when counseling in another language. Knowing that they are not alone in their difficulties may help them to become more comfortable during these sessions. Another issue that may be overlooked is that bilingual students may have an increased workload during a clinical rotation involving their second language. Compared to their unilingual classmates, they may have the opportunity to see an increased variety of cases; however, the increased workload may augment their negative feelings with regards to counseling in another language. It might be beneficial to allow them more time to prepare for cases and/or decrease the overall case workload of that rotation.

Students may not be able to attain the same level of proficiency in their counseling skills when sessions occur in another language, as they may be more focused on understanding what the patient is saying and using the proper vocabulary. If a program encourages students to counsel in a particular language, it might be beneficial to offer a course in which they proper medical terminology in that language. It might also be beneficial to create a list of words common to genetics and genetic counseling that could be distributed to students. As students reported difficulties in writing patient letters and supervisors described that marking these students' letters and chart notes was more time consuming, programs might provide writing aids.

Since supervisors may be affected by the introduction of another language into training and supervision, they may require increased support and guidance from the training program and from their colleagues. A supervisor workshop to discuss issues associated with supervising bilingual students or students who do not share their first language may aid in their assessments of whether a student's problems are due to a deficiency in the necessary skills versus a language issue. Increased peer support may also help to alleviate feelings of inadequacy and anxiety some supervisors reported feeling when a student has a higher language proficiency than they do.

Finally, the field of genetic counseling has long recognized the need to diversify and to increase the cultural competency of its professionals. Recruitment of bilingual students is a reasonable priority alongside the recruitment of students who identify as a visual minority. In doing so, both students and supervisors should have access to extra tools, guidance and support to minimize anxiety and to maximize their learning opportunities.

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