I, Rachael J. Bradshaw, hereby submit this work as part of the requirements for the degree of:

**Master of Science**

in:

**Medical Genetics**

It is entitled:

**Training and Attitudes of Recent Graduates Regarding the Provision of Culturally Competent Genetic Counseling Services to Latinos**

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Training and Attitudes of Recent Graduates Regarding the Provision of Culturally Competent Genetic Counseling Services to Latinos

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ABSTRACT

Genetic counselors’ lack of cultural competence is a major barrier to the provision of genetic counseling services to Latinos. Pre-professional training is an essential time to teach cultural competence. This study aimed to measure two components of competence with Latino culture, cultural knowledge and comfort working with Latinos, in genetic counselors who graduated from a training program in the previous 39 months. One hundred twenty members of the National Society of Genetic Counselors completed a survey assessing cultural knowledge using factors previously identified as important in the genetic counseling literature. Cultural knowledge scores were directly correlated with Spanish language skills and amount of exposure to Latino clientele during training. Implications for further research and graduate education are discussed because all students will counsel increasing numbers of Latinos during their career.
ACKNOWLEDGEMENTS

I would like to thank the members of my research advisory committee for their guidance and support throughout this project. Martha Walker and Nancy Steinberg Warren helped me formalize the idea for this project. Both have been willing editors and have encouraged me throughout multiple revisions of the idea and proposal. Dr. Cynthia Goody provided me with great insight into crucial issues involved in providing health care services to Latinos, and was instrumental in my survey design and manuscript writing. Special thanks to Douglas Hott, University of Cincinnati webmaster, for developing my web-based survey, maintaining the server, and creating my database. He always responded quickly to requests and his knowledge was extremely helpful. I would also like to thank Dr. Victor Penchaszadeh, Dr. Vivan Ota Wang, and Monica Alvarado for their assistance in forming the idea for this thesis as well as revision of the survey tool. Finally, thanks to my classmates and husband for all of their support and input.
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INTRODUCTION

Cultural competence is defined as “a set of congruent behaviors, attitudes, and policies that come together among professionals and enables those professionals to work effectively in cross-cultural situations.”\(^1\) Many researchers report that lack of cultural competence on the part of a health care provider is a barrier to the access and utilization of services by clients from many cultures, including the Latino culture.\(^2, 3, 4, 5, 6\)

According to the 2000 Census, Latinos are the largest minority group in the United States.\(^7\) Latino clients’ understanding of and attitudes towards topics commonly discussed in genetic counseling sessions may be influenced by characteristics of their Latino culture, including the significance of Catholicism, the belief that bad thoughts can cause illness, and not wanting to interfere with “God’s plan” (fatalism).\(^6, 8, 9\)

Previous studies in the field of genetic counseling have identified cultural competence as a crucial component of effective, appropriate practice\(^3, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17\) and training is therefore essential for preparing genetic counselors to provide appropriate genetic counseling to Latinos.

Literature from multiple fields emphasizes that health care providers should be trained in cultural competence prior to their entrance into professional practice.\(^18, 19, 20\) Despite the general recognition of the importance of cultural competence training in pre-professional education, there are no studies characterizing the cultural competence training received by genetic counseling graduate students. The percent Latino population of the cities in which the 24 genetic counseling training programs are located varies from 1.3% in Pittsburgh and Cincinnati to 46.5% in Los Angeles.\(^7\)

Students with an interest in Latino culture will probably seek opportunities to counsel Latino clients during their
training. However, the rapid growth of the Latino population in the U.S. implies that all genetic counselors will likely counsel Latino clients with increasing frequency during their careers. For this reason, it is essential to characterize the competence with Latino culture of genetic counselors who graduated recently from U.S. training programs. An assessment of counselors’ cultural competence should help with the development and improvement of genetic counseling training program curricula, and as demographics in the United States change it could serve as baseline information for future studies.

The current study is the first to describe the competence of genetic counselors in the U.S with Latino culture. Recent graduates’ knowledge of Latino culture and their comfort working with clients from this population were measured. The study assessed participants’ exposure to Latino clients during graduate school, quantified their knowledge of Latino culture, and measured their comfort providing genetic counseling to Latinos. Furthermore, participants’ specific experiences in training were characterized, along with their attitudes towards the implementation of cultural competence in actual practice. The study identified some barriers but also some experiences that practicing genetic counselors have found most valuable in learning how to effectively provide genetic services to Latino clients. Because the proportion of Latino clients that make up genetic counselors’ caseloads will increase greatly over time, regardless of the area in which they ultimately choose to practice, the findings from this study should help practicing genetics counselors self-assess their need for continuing education in cultural competence. Also, the characterization of recent graduates’ cultural knowledge and comfort providing genetic counseling to Latinos could lead to improvements in training
program curricula and the introduction of learning activities and opportunities which more effectively train students to counsel Latino clients.

METHODS

Study Design and Sample

The project was approved by the Institutional Review Board prior to initiation. Subjects of this cross-sectional study were genetic counselors ascertained through the directors of the genetic counseling graduate training programs as well as the National Society of Genetic Counselors listserv. Questionnaire responses from graduates of the 24 genetic counseling training programs in the U.S. between January 1, 2001 and March 31, 2004, were included in this study. Responses from students currently enrolled in a genetic counseling training program, people who graduated before January 1, 2001 or after March 31, 2004, and people who graduated from a genetic counseling training program outside of the U.S. were excluded from the study.

Measures

A web-based, self-report questionnaire was developed (Appendix A). A multidisciplinary team of genetic counselors, physicians, biomedical science researchers, and epidemiologists reviewed the questionnaire prior to use. A webmaster designed and hosted the web-based questionnaire on a secure company server. Three genetic counselors who recently graduated from three different U.S. genetic counseling training programs pilot tested the questionnaire. The questions focused on graduate training, current practice, knowledge of Latino culture, comfort working with Latinos, and methods used for counseling Latino clients. There were 31 questions, 30 of which were
closed-ended. Respondents provided a short answer for most questions either by choosing options from a pre-determined list, using a 5-point Likert scale, or by entering a number. The final question was open-ended for the purpose of gathering comments.

Procedures

Genetic counselors received an invitation to participate through the NSGC listserv. Although there was no way to ensure that each person received each message, all full members of the organization theoretically receive each post via email. Another message was sent to the NSGC program directors’ listserv requesting that the program directors forward the invitation to participate to students who graduated from their respective programs after December 31, 2000.

The emailed invitation to participate explained the aim of the study and its voluntary nature (Appendix B). By submitting the survey, subjects gave their consent to participate. A direct internet link to the questionnaire was included in the body of the letter. When subjects clicked on the internet link a separate window showing the questionnaire immediately opened. This window was not connected to the original email message so the questionnaire could not be traced back to the original email. Subjects completed the questionnaire and then submitted their responses. All responses were anonymous and each response was saved in a secure database.

Data Analysis

All data were initially saved in a text file database on the webmaster’s secure server. The SPSS system for Windows, version 12.0 was used for data analysis. For
most questions, descriptive statistics including frequencies and means were computed. Chi-square, ANOVA, t-test, and bivariate correlation analyses were performed to determine interactions between variables and identify the statistical significance of differences between groups. The statistical significance threshold was set at the $p \leq 0.05$ level.

**RESULTS**

**Sample Characteristics**

One hundred twenty questionnaire responses were received, with a theoretical response rate of 27%. There were 453 potential subjects, as determined by contacting the directors of all U.S. genetic counseling training programs and requesting the number of students who had graduated from their programs between January 1, 2001 and March 31, 2004 (including the University of California-Berkeley program). For two programs, the number of potential subjects was extrapolated based on current class sizes. Response rate by year of graduation was: for 2001, 20% (30/147); for 2002, 28% (38/137); for 2003, 30% (48/158); and for 2004, 36% (4/11). Eligible responses were received from graduates of each of the 25 U.S. training programs which had graduated students between January 1, 2001, and March 31, 2004 with the exception of the University of California-Berkeley. There were not sufficient responses to represent all graduating classes from every program.

Table 1 contains a summary of respondent characteristics. Respondents were only able to choose one area of practice in which they had spent the majority of their professional time as a genetic counselor. For this reason, it is not possible to determine if the respondent demographics based on area of practice were truly representative of the
general population of recent graduates of genetic counseling programs by comparing them to the Professional Status Survey, in which respondents were able to mark more than one area of practice. 100% of respondents’ who reported their gender were female, which is greater than would be expected based on the PSS, in which 96% of respondents were female.

**Knowledge of Latino Culture**

The knowledge score was based on how many of the 5 “correct” options each respondent chose when asked which 5 of 10 choices they would incorporate into a genetic counseling session with a Latino client in order to be most culturally competent. The “correct” answers were determined according to a paper published by Dr. Victor Penchasazadeh, with “incorrect” answers being those that were not derived from known characteristics of Latino culture (Table 2). The mean knowledge score was 82%, with 10% of respondents scoring below 80%. 20% of respondents received a score of 100%. The most frequently missed correct answer was “use a more directive approach to genetic counseling,” with only 46% of respondents choosing this option as correct answer.

**Spanish Skills**

An exceptionally high rate of respondents (56%) reported that they could speak at least some Spanish. Respondents then reported whether they could perform seven different genetic counseling skills in Spanish (Table 3). 39% of respondents reported that they could not perform any of the Spanish counseling skills listed, while 6% reported that they could perform all of the Spanish counseling skills listed. On average, respondents could perform two skills; these were most often greeting the client/asking a few questions and taking a pedigree in Spanish.
Exposure to Latino Clients

Graduate training programs were categorized as being situated in a city with either a “low” (1.3-5%), “medium” (7.3-14.4%), or “high” (26-46.5%) Latino population based on the percentage of the city’s total population that is Latino according to the 2000 U.S. Census. 42% of respondents attended a graduate training program in a city with a low Latino population, 25% attended a program with a medium Latino population, and 33% attended a program with a high Latino population. The Latino clients who were observed or counseled by respondents during their graduate training in genetic counseling ranged from 0% to 75% of their caseload; the mean was 15%. Four percent of respondents reported not observing or counseling any Latino clients during training. Respondents’ exposure to Latino clientele during training was proportionate to the Latino population of the city in which their training program was situated (F=38.659, df=2, 117, p=0.000).

When asked about their satisfaction with the exposure they received to Latino clients during training, 38% ranked their satisfaction at 2 or less and 69% ranked their satisfaction at 3 or less on a 5-point scale, with 1 being not satisfied and 5 being very satisfied. Satisfaction level did increase with the percentage of Latino clients seen during training, as reported by respondents (F=2.977, df=22, 97, p=0.000).

Comfort with Counseling Latinos

Respondents ranked their comfort counseling both Latinos who speak primarily English and Latinos who speak primarily Spanish on a 5-point scale, with 1 being not comfortable and 5 being extremely comfortable. 76% of respondents ranked their comfort counseling Latinos who speak primarily English at 5, while only 18% ranked
their comfort counseling Latinos who speak primarily Spanish at 5. The mean comfort level counseling Latinos who speak primarily English was 4.75, and the mean for counseling Latinos who speak primarily Spanish was 3.6. In response to the open-ended question, 16% of respondents reported some discomfort in altering their methods of genetic counseling based on a client’s culture.

**Predictors of Respondents’ Cultural Knowledge and Comfort Counseling Latinos**

The best predictor of a respondent’s cultural knowledge was her Spanish language proficiency. The mean cultural knowledge score of 85% was significantly higher for those respondents who reported having some Spanish language skills as compared to the mean score of 78% for those who reported having no Spanish language skills ($t=3.053$, $df=113$, $p=0.003$). Furthermore, as respondents’ number of Spanish counseling skills increased, so did their cultural knowledge score ($r=0.24$, $p=0.01$). Another significant correlation was that cultural knowledge was higher with respondents’ greater reported amount of exposure to Latino clients during training ($r=0.177$, $p=0.05$).

The only significant correlation with respondents’ comfort counseling Latinos who speak primarily Spanish was with the respondents’ reported Spanish counseling skills ($\chi^2=10.041$, $df=4$, $p=0.04$). This correlation was not significant when comparing respondents’ comfort counseling Latinos who speak primarily English and the respondents’ reported Spanish counseling skills.

**DISCUSSION**

This study is the first to assess two important aspects of genetic counselor’s competence with Latino culture, cultural knowledge and comfort working with Latino clients. Recent graduates of genetic counseling programs were targeted in order to focus
on the training issues that contribute to a presence or lack of cultural competence as opposed to professional practice issues. This study indicates that recent graduates of genetic counseling programs are learning the characteristics of Latino culture, and that they are, overall, comfortable providing genetic counseling to Latinos who speak either English or Spanish. Nevertheless, this study reveals several barriers to the acquisition of this knowledge and comfort, and it identifies attitudes about the implementation of cultural competence in practice. The findings of this study have direct implications for genetic counseling training programs by indicating areas in which there are specific needs for training students to be more culturally competent.

Several papers outline the characteristics of Latino culture that should be considered in order to provide culturally competent genetic counseling to Latinos. Penchasazdeh discusses cultural characteristics such as the importance of extended family in decision making and the patriarchal nature of Latino families.\(^3\) He stresses that incorporation of knowledge of Latino culture into clinical practice is essential in order to provide appropriate genetic services to this underserved population, an idea that is reinforced by others.\(^6, 8, 22\) The results of our study suggest that recent graduates of genetic counseling training programs are knowledgeable about Latino culture, given the relatively high mean knowledge score (82%) in item #1. At least 80% of respondents chose four of the five correct answers as culturally competent methods of counseling Latino clients. This implies that training programs are doing an adequate job providing education to their students about the characteristics of Latino culture.
In their response to the open-ended question, respondents did offer insight into the experiences which have trained them to provide culturally competent genetic counseling to Latino clients, and which have increased their comfort providing these services:

“I do have frequent contact with Latino patients, and feel comfortable communicating with them. This comfort has come primarily through on-the-job experience, although the training provided in my program regarding how to use a translator was very helpful when it came time for my first interpreted session.” (respondent #27)

“At my graduate school, we took a cultural (including the Latino culture) competency class and participated in other activities to prepare for utilizing interpreters, counseling patients in a different language, etc. I still felt prepared even though the population we were counseling face-to-face were [sic] primarily White (non-Latino) and English-speaking patients.” (respondent #50)

“I am hoping to improve my skills in Spanish and have recently begun a weekly intermediate level course with a private instructor. I had taken Spanish throughout school and received a minor in college, and in my GC program, was encouraged to participate in the Spanish speaking sessions.” (respondent #74)

“As part of my training program, I traveled to a different region of the U.S. to get exposure to counseling Latino immigrants.” (respondent #77)

These comments support the idea that students benefit from cultural education and exposure to diverse clients during graduate training, and they offer recommendations for alterations that training programs can make in order to increase the cultural competence of their graduates.

Only 46% of respondents realized that being more directive is a culturally appropriate method for counseling Latinos, determined by the most frequently incorrect response to item #1. Nondirectiveness as one of the central tenets of genetic counseling is currently a subject under great scrutiny within the genetic counseling community, and this subject becomes more complex when considering the cultural differences of clients. Therefore, it is not surprising that the majority of respondents feel uncomfortable using a
more directive approach to genetic counseling with Latino clients. Nondirective counseling may be received poorly by Latinos because Latino culture is one that sees health care providers as authorities, and because Latinos tend to be less concerned with individualism than Caucasian Americans. In his book, *Psychosocial Genetic Counseling*, Jon Weil offers some insight into the complex issue of using nondirective counseling methods with culturally diverse clients. He explains that individuals from certain cultures expect any health care provider to be responsible for medical decision making. When this decision making is not made by a genetic counselor, the client may perceive that the counselor is being directive when he/she is not or that the counselor is avoiding his or her responsibility. This can ultimately lead the client to lose respect for the counselor and to instead seek guidance from family members, clergy, or other health care providers. A need for further research examining the effects of nondirective versus directive counseling on the Latino population is strongly implicated by previous research as well as the current study.

Another interesting finding was the association between Spanish language skills and higher cultural knowledge scores. Knowledge was assessed due to responses from item #1 on the survey, for which none of the options required any familiarity with the Spanish language. It can therefore be inferred that people with Spanish language skills are also more educated about aspects of Latino culture. This is not a surprising finding. It is possible that people who are motivated to learn Spanish as a foreign language are also interested in the customs, values, and beliefs of the native speakers of that language. Although 56% of respondents reported that they can speak some Spanish, this is likely not representative of the population of recent graduates of genetic counseling training.
programs in the U.S. as a whole. A 1992 study showed that only 5% of genetic counselors reported having Spanish language skills.\textsuperscript{24} It is likely that our survey overwhelmingly attracted respondents who have an interest in the Spanish language suggesting that, had the sample been more representative of the general population of recent graduates, the mean knowledge and comfort scores would have been even lower. This is an important point to consider because during their careers all genetic counselors, regardless of their language skills, are likely to counsel an increasing number of Latinos. For this reason, genetic counseling training programs must find a way to motivate all students to learn more about Latino culture and thereby increase the cultural competence of their graduates.

The results show that respondents’ cultural knowledge increased along with their reported amount of exposure to Latino clients during training. Again, while it is possible that students with a greater interest in the Spanish language and in Latino culture sought opportunities to counsel these clients, all respondents reported a significant increase in exposure to Latino clients during training as the Latino population of the city in which the training program is situated increased, regardless of their Spanish language skills. Given that several studies have identified pre-professional training as a crucial time to teach cultural competence,\textsuperscript{17, 18, 19, 20} the current investigation raises the issue that training programs in cities with smaller Latino populations need to find alternative ways to teach their students to provide culturally competent services to Latino clients. Training issues are especially important considering that people often attend a program situated in an area of the country with a client population very different from that in which they will ultimately practice. Considering that respondents’ satisfaction with their exposure to
Latino clients significantly decreased as the proportion of Latino clients seen in training decreased, it is appropriate to presume that students would receive a more satisfying learning experience if other methods were incorporated into the cross-cultural aspects of their genetic counseling training.

Not surprisingly, respondents reported a higher mean comfort level (5 being extremely comfortable) counseling Latinos who speak primarily English (4.75/5) as compared to counseling Latinos who speak primarily English (3.6/5). The language barrier is probably the greatest contributor to respondents’ lower comfort level in providing genetic counseling to Spanish-speaking Latinos, and so one way in which genetic counselors can increase their comfort is by learning to speak Spanish. Respondent #2 commented, “Recently I have taken a job where I am using my Spanish skills much more than my previous job, and I am starting private Spanish tutoring tonight which will help with my comfort level and my ability to counsel in Spanish.” It is important to note, however, that the language barrier is probably not the only contributor to the lower comfort level when counseling Spanish-speaking Latinos, especially given the fact that the majority of our respondents reported having some Spanish language skills. Because Spanish-speaking Latinos are likely to be more recent immigrants to this country and/or to be surrounded by more Spanish-speaking people than English-speaking Latinos, Spanish-Speaking Latinos are likely to be more deeply immersed in Latino culture. For this reason, there is probably also a cultural barrier contributing to a lack of comfort counseling Latinos who speak primarily Spanish. In order to eliminate this barrier, genetic counseling training programs need to find ways to improve education
about the characteristics of Latino culture, while also teaching students how to effectively and comfortably utilize this knowledge in a clinical setting.

While it is clear from reading the literature that higher cultural competence on the part of the health care provider is essential in improving utilization of and satisfaction with health care services by Latinos, one of the most interesting findings of the current study is that 16% of respondents expressed discomfort in using their cultural knowledge to alter the way in which they counsel Latino clients.

Consider the following statements:

“No person should assume, based on ethnicity, what is appropriate and inappropriate in the genetic counseling session... The concept of assuming a patient's beliefs based on ethnicity is ridiculous [sic].” (respondent #86)

“I try very hard to treat all patient's [sic] equally, while at the same time tailoring each session to a patient's needs... Perhaps this makes me culturally ignorant, but I have never had a patient seem upset with me...” (respondent #31)

“For every patient regardless of background, I would try to establish what is important for that person. I would not want to generalize based on specific background or heritage.” (respondent #93)

The most common reason that respondents reported discomfort with the modification of their counseling based on a client’s culture was because they felt that by doing so they were stereotyping the client and in danger of ignoring client autonomy. Another concern that was voiced is that the term “Latino” encompasses people from several very different countries, including Mexico, Chile, and Cuba. Respondents thought that it would be a mistake to assume that all Latino clients, much less all Mexican or Cuban clients, have the same attitudes, beliefs, and values. These are valid concerns which have been noted in the literature. However, when a health practitioner completely ignores a client’s culture, a practice is known as cultural blindness, clients are less satisfied with the
services they receive and are less likely to utilize them in the future. It is essential that more research be done regarding how to provide culturally competent genetic counseling to Latinos while preserving client autonomy. Furthermore, genetic counselors must be trained to use the characteristics of Latino culture as a starting point from which they explore issues with each client in order to provide individualized counseling and thereby increase client satisfaction and utilization of services.

There were limitations to this study that must be recognized. First, as mentioned before, we believe there was response bias. Due to the high percentage of respondents that reported having some Spanish language skills, it seems that people with an interest in the Spanish language and therefore Latino culture were more likely to respond to the survey. This is a bias that needs to be considered when interpreting the results of this study, but only adds support to the idea that there are deficits in the education and experiences that students are receiving from genetic counseling training programs in the area of provision of genetic counseling to Latinos, given that several barriers and areas for improvement were identified even in a subgroup of counselors enriched by interest in and knowledge of Latino culture. Another limitation was the small response rate and, in turn, relatively small sample size. Again, these limitations make the findings of this study less applicable to the population of genetic counselors as a whole, but only bolster the argument that there are significant deficits in the training of genetic counselors in culturally competent practice with Latino clients.

Another limitation was due to the fact that many people ultimately chose options in the knowledge portion of the survey with which they were not comfortable because they were required to choose exactly five of the ten options in order to electronically
submit their responses. This feature of the survey was designed to aid in the analysis of the data; however, several respondents felt obliged to choose more options than they would have liked when asked what they would incorporate into a session with a Latino client in order to be most culturally competent. It is probable that, had respondents had the ability to choose as many of the ten options as they would have liked, the mean knowledge score would have been lower. This suggests that there is a need for further characterization of the knowledge of genetic counselors about Latino culture, and supports the idea that training programs need to improve the methods they use to teach cultural characteristics to students.

CONCLUSIONS

This study of a sample of practicing genetic counselors indicates that recent graduates from ABGC certified training programs have an adequate level of knowledge about the characteristics of Latino culture and that they are, overall, comfortable providing genetic counseling to Latinos. Nevertheless, two factors that are potential barriers to knowledge and comfort were identified: lack of Spanish language skills and lack of exposure to Latino clientele during training. Students were found to be more satisfied with their training as their exposure to Latino clientele increased. Training programs are therefore advised to find ways to enhance these experiences for their students, regardless of the size of Latino population in the locale of the training program. Finally, this study raised the important issue that genetic counseling training programs must address the need to teach students how to incorporate cultural competence into their practice such that they feel comfortable and confident that they are not stereotyping clients based on race, ethnicity, or culture. Some experiences respondents found helpful
in improving cultural competence that training programs might consider incorporating into their curriculum are: instruction in how to use a medical interpreter, cultural competence courses, encouraging students to seek opportunities to counsel Latinos during training, and arranging clinical internships to expose students to greater numbers of Latino clients.
REFERENCES


### Appendix:

**TABLE 1. Demographics of Respondents (N=120)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (N=117)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>117</td>
<td>100</td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Year of graduation (N=120)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>2002</td>
<td>38</td>
<td>32</td>
</tr>
<tr>
<td>2003</td>
<td>48</td>
<td>40</td>
</tr>
<tr>
<td>2004</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Employment history (N=120)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have been employed</td>
<td>115</td>
<td>96</td>
</tr>
<tr>
<td>Have not been employed</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Area of practice (N=115)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult general genetics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Cancer</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Pediatric</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>Prenatal</td>
<td>60</td>
<td>52</td>
</tr>
<tr>
<td>Research</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Spanish language skills (N=115)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can speak some Spanish</td>
<td>64</td>
<td>56</td>
</tr>
<tr>
<td>Can not speak any Spanish</td>
<td>51</td>
<td>44</td>
</tr>
</tbody>
</table>
### TABLE 2. Knowledge of Latino Culture of Genetic Counselors (N=120)

Responses to Item #1: **To be culturally competent in a genetic counseling session with a Latino client who speaks primarily Spanish, which of the following should you do? (PLEASE CHOOSE EXACTLY 5)**

<table>
<thead>
<tr>
<th>Option</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Include relatives and friends as well as nuclear family in decision making</td>
<td>117</td>
<td>98</td>
</tr>
<tr>
<td>Avoid touching client for any reason</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>* Respect paternalistic nature of Latino families</td>
<td>104</td>
<td>87</td>
</tr>
<tr>
<td>Avoid discussion of religion as this subject matter is seen as disrespectful</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>* Use a more directive approach to genetic counseling</td>
<td>56</td>
<td>47</td>
</tr>
<tr>
<td>* Show respect to client despite real or perceived differences in educational attainment</td>
<td>119</td>
<td>99</td>
</tr>
<tr>
<td>* Address role of faith and prayer in health and well-being</td>
<td>96</td>
<td>80</td>
</tr>
<tr>
<td>Do not discuss the possibility of disease, because that is believed to make the disease happen</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Discuss higher frequency of β-thalassemia trait in people from Mexico as compared to people with a Mediterranean background</td>
<td>22</td>
<td>18</td>
</tr>
<tr>
<td>Use a softer tone of voice than usual to communicate with client</td>
<td>53</td>
<td>44</td>
</tr>
</tbody>
</table>

* indicates those options that were “correct”

Adapted from Penchaszadeh, V., 2001.
**TABLE 3.** Spanish Counseling Skills of Respondents (N=115)

<table>
<thead>
<tr>
<th>Response to item #10: I can do the following things:</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greet the client in Spanish and ask a few simple questions</td>
<td>70</td>
<td>61</td>
</tr>
<tr>
<td>Take a pedigree in Spanish</td>
<td>39</td>
<td>34</td>
</tr>
<tr>
<td>Describe the genetic testing procedure (e.g. amnio, blood chromosomes) in Spanish</td>
<td>25</td>
<td>22</td>
</tr>
<tr>
<td>Discuss the condition, prognosis, and treatment in Spanish</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>Discuss psychosocial issues in Spanish</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>Write a summary letter or brochure for patients in Spanish</td>
<td>13</td>
<td>11</td>
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<tr>
<td>Give presentations to patients on various genetic disorders in Spanish</td>
<td>12</td>
<td>10</td>
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