

**Psychosocial Genetic Counseling: Techniques, Training, and Theory**

Master's Thesis

Presented to:  
Biology Department and Genetic Counseling Program  
Brandeis University

David Rintell, Ed.D., Advisor

In Partial Fulfillment of the  
Requirements for the  
Degree of Master of Science

By  
Natasha Barron

May 2010

### **Acknowledgements**

I would like to thank my committee, David Rintell, Ed.D., Janet Rosenfield, MS, CGC, and Lindsay Morse, MS, CGC, for their guidance, thoughtful comments, and support. My thanks go to Scott Motyka for his assistance and guidance with the statistical analysis. Thank you to Judith Tsipis, PhD, Gretchen Schneider, MS, CGC, Beth Rosen-Sheidley, MS, CGC, Missy Goldberg, and the Brandeis University Genetic Counseling Program. To my family, friends, and fellow classmates, thank you for your love and support.

**Abstract**

There are a wealth of resources to illustrate psychosocial counseling techniques that might be utilized by genetic counselors. However, it is unclear to what extent specific counseling techniques are actually used by genetic counselors in practice. The purpose of this study was to explore the current practice of genetic counselors with respect to specific counseling techniques, and to assess their comfort level in incorporating counseling elements into their patient interactions. We hypothesized that counselors would be mostly likely to endorse the techniques strongly associated with Rogerian theory (empathy, unconditional positive regard, and genuineness). We recruited genetic counselors currently practicing in a clinical setting through the NSGC listserv to participate in an online, anonymous survey. The survey consisted of twenty-four multiple choice, Likert scale and open-ended questions focused on the application of specific counseling techniques and counseling training that participants received. A total of 128 respondents counselors completed the survey. When asked to rank the usefulness of empathy, acknowledgement, validation, unconditional positive regard, promoting competence and autonomy, reframing, and genuineness as counseling techniques, respondents ranked acknowledgement, empathy, and validation as the most useful. Respondents reported that role playing and genograms were not used as often and were not as useful in a genetic counseling setting as the other techniques. Overall, respondents reported being comfortable incorporating psychosocial techniques into their practice. However, comfort level did not correlate with experience or coursework. Our findings suggest that in practice, Rogerian theory may not be the foundation upon which most counselors interact with patients. Future research should include study into the amount

and type of psychosocial genetic counseling training in genetic counseling programs.

Another area to be investigated is a possible underlying psychosocial theoretic base of genetic counseling which incorporates techniques being used by genetic counselors as well as counselors' values and priorities.

---

Key words: psychosocial genetic counseling, counseling techniques, client-centered theory, psychosocial training

**Table of Contents**

Acknowledgements.....ii

Abstract.....iii

Table of Contents.....v

List of Figures.....vi

List of Tables.....vi

Introduction.....1

Methods.....7

Results.....9

Discussion.....22

Conclusion.....26

References.....28

Appendix A: Recruitment Notice.....29

Appendix B: Survey.....30

**List of Figures**

Figure 1. Region where participants are currently employed.....10  
 Figure 2. Region where participants’ genetic counseling master’s programs were  
 located.....10  
 Figure 3. Primary clinical setting.....11  
 Figure 4. Years of experience.....12  
 Figure 5. Total number of psychosocial counseling classes taken.....15  
 Figure 6. Total number of hours of additional psychosocial counseling training.....16  
 Figure 7. How often specific psychosocial counseling techniques are used.....18  
 Figure 8. How useful specific psychosocial counseling techniques are in practice.....18  
 Figure 9. Level of comfort with psychosocial counseling after graduation.....20  
 Figure 10. Current level of comfort with psychosocial counseling.....21

**List of Tables**

Table 1. Number of minutes spent for each element of a counseling session.....13  
 Table 2. Types of classes in which respondents participated.....15  
 Table 3. How often the technique was listed in the top three in terms of  
 usefulness.....19

**Introduction**History of the Psychosocial Aspects of Genetic Counseling

In the early years of genetic counseling, the emphasis was mainly on the education of the patient and family. Kessler (1980) discussed the paradigm shifts in genetic counseling. He found that prior to the 1950s, genetic counseling was based on the eugenic paradigm and was more directive, encouraging people not to reproduce if a genetic defect might be passed on. In the 1950s, genetic counseling became more nondirective as the thought became more prevalent that people would be rational in their decisions, and if faced with the facts of their hereditary problems, they would feel an obligation to society to limit the number of children they would have. Also in the 1950s, genetic counseling was conducted mostly by physicians. Kessler points out that as genetic counseling became more nondirective, physicians continued doing the counseling and began to experience a new way of interacting with patients. In a directive setting the physician is in control, whereas in a nondirective setting the patient and physician are equals. Kessler states that another paradigm shift towards psychologically-oriented genetic counseling started in the 1970s. At this point it became evident that “In short, the entire process of genetic counseling is in its very core a psychological enterprise whose effectiveness (or ineffectiveness) rests on the extent to which realistic behavioral and psychosocial principles and methods are understood and applied in the counselor-counselee relationship.” (Kessler 1980)

Some authors feel that the genetic counseling profession has not yet reached its full potential in terms of incorporating psychosocial aspects into clinical practice.

McConkie-Rosell and Sullivan (1999) report that there is a need to develop genetic counseling interventions based upon a guiding theoretical basis which help enhance the genetic counseling process. This is needed due to the genetic counselor's unique nature as both a counselor and educator. (McConkie-Rosell and Sullivan 1999)

Although psychosocial goals are included in the description of what a genetic counselor does, many counselors do not include psychosocial techniques or goals in their sessions. According to Eunpu (1997), only about 6% of counselors surveyed identified an interest in psychotherapy in 1995. The limited amount of time for training is cited as one reason for lack of interest in psychotherapy. A second possibility is that since genetic counseling takes place mostly in medical centers, the sessions are based upon the medical model, and therefore counselors spend more time talking about risks and medical information and less time focusing on psychosocial needs. (Eunpu 1997)

If counselors receive more in-depth counseling training, some authors feel the overall effectiveness of the genetic counseling session will improve. Kessler (1980) notes that when decision-making takes place in a session, the genetic counselor will attempt to help the clients by using many techniques used in similar psychotherapy situations such as "clarification of motivations and beliefs, an examination of alternatives with their respective pros and cons, a presentation of options not considered in the counselees' thinking, an identification and labeling of facts and fantasies, challenges to unrealistic beliefs, and so on. ... Presumably, genetic counselors trained in such skills would be more effective in this arena than those without such skills." (Kessler 1980)



Kessler (1998) proposes that the teaching model may no longer be the primary basis for genetic counseling sessions as it once was when parents of affected children needed mainly to be educated about the child's genetic condition, medical management, and recurrence risks for future pregnancies. As more testing becomes available for adult-onset conditions, counselors need to be prepared to use a variety of techniques to deal with the issues that arise when the counselee is directly affected by the genetic condition. Kessler states that, in the training of genetic counseling students, more attention must be paid to psychosocial goals and counseling skills as well as to being sure to address issues such as transference, countertransference, and dependency. (Kessler 1998)

#### Psychosocial Counseling Techniques Mentioned in this Study

##### *Unconditional Positive Regard, Empathy, and Genuineness*

Weil (Weil 2000) states that Rogers' client-centered theory has had a strong influence on genetic counseling and, as such, Rogers' three main ideas should play a large role in the list of techniques used by genetic counselors. These three techniques are: unconditional positive regard, empathy, and genuineness. As Weil puts it, unconditional positive regard "involves respecting and accepting the counselee as a complete individual, including his or her strengths, weaknesses, and full range of feelings and behaviors." Empathy is described as "...an understanding, insofar as possible, of the counselee's lived reality. This includes his or her past and present experiences, emotions, and perceptions of the world, and the role these play in shaping behavior." Genuineness is described as "...the counselor's openness to her own emotional experiences in the interaction with the counselee, and a modulated but honest expression of this in her interactions with the counselee." (Weil 2000)

*Validation*

Another technique counselors may wish to employ is to validate and value clients' being and inner experiences. (O'Hanlon and Beadle, 1996) Validation occurs when a counselor normalizes what a client is experiencing.

*Acknowledgement*

Counselors can use acknowledgement to let clients know that the counselor has heard and understood their suffering, their concerns, their felt-experience and their points of view. (O'Hanlon and Beadle, 1996)

*Promoting Competence and Autonomy*

Due to the nature of the reasons for coming for genetic counseling, many counselees may feel anxiety, stress, self-doubt, and low self-esteem. Since the goals of the session include patient autonomy in decision-making, it is important that the counselor promotes competence and autonomy in the patient. This includes using comments that support or praise the counselee either as an individual or as part of a couple or a family. (Kessler 1999, Weil 2000)

*Reframing*

Reframing involves restating a situation or a problem in a way that will open up more options in the way that the counselee views or perceives that problem. This can lead to more avenues of solutions or normalizing of a situation that was seen as a failing or emotions that were seen as negative. (Kessler 1997, Weil 2000)

*Role Play*

Role play can be used to help with changes in thought or behavior which might coincide with a new coping strategy or communication style. Role playing involves the

counselor and counselee acting out certain situations to help a counselee find the best way of approaching an uncomfortable situation such as discussing positive test results with family members. (Weil 2000)

### *Genograms*

Genograms are a visual representation of the relationships within the family and can be useful in exploring family attitudes and beliefs about genetic risk as well as promoting communication skills. Since a genogram is set up similarly to the pedigree which will already be acquired by the genetic counselor, it is a relatively simple technique to add into a session. (Eunpu 1997)

### Purpose

There is a good deal of information written about different psychosocial techniques which can be used by genetic counselors, but little is known about techniques actually used by genetic counselors. One goal of this study was to determine how often specific psychosocial techniques are used in genetic counseling practices. In the literature there is uncertainty about how much influence Rogers' client-centered theory, which centers on the three techniques of empathy, unconditional positive regard, and genuineness, has had on psychosocial genetic counseling. Therefore, another goal of this study was to look at whether the Rogerian techniques are used more frequently or are found to be more useful than other techniques. The last set of goals we had for this study involved discovering how the amount of counseling training received affects psychosocial genetic counseling. We hypothesized that more-experienced counselors would be more likely to feel comfortable using psychosocial techniques. We also

hypothesized that the training that graduate schools, undergraduate schools, and volunteer positions provide would also affect the level of comfort in psychosocial counseling that genetic counselors have.

## **Methods**

### Study Design

We posted a recruitment notice to members of the National Society of Genetic Counselors (NSGC) via the NSGC listserv inviting eligible counselors to participate in this study (Appendix A). The recruitment notice was posted twice over a four-week period during January-February 2010. Participants were eligible to complete the survey if they are genetic counselors currently working in a prenatal, pediatric, cancer, or adult clinical setting.

We designed an anonymous, online survey hosted on [surveymonkey.com](http://surveymonkey.com) (Appendix B) that asked genetic counselors about the counseling techniques they use in their practice. The survey contained 24 questions and consisted of three major sections: demographics, psychosocial training, and psychosocial techniques. We asked how much time was spent on psychosocial counseling, as well as what types of techniques they used, how often they used them, and how helpful they were. We also asked about counseling training that the participants had received. The primary format of this survey was quantitative including multiple choice questions, Likert scales, and fill-in-the-blank questions. We also included some optional open-ended questions to help supplement the quantitative answers.

### Data Collection

Respondents utilized an on-line link to access the survey on SurveyMonkey.com. Counselors filled out the survey, and data was placed into a digital file.

### Data Analysis

SPSS Statistics software version 17.0 for statistical analysis was utilized. We used descriptive statistics to describe our sample population. To determine significant relationships between variables, we used Pearson's correlation analysis. For the open-ended questions, we reviewed and analyzed the responses by coding for emergent themes.

**Results**

A total of 178 surveys were received. Participants who completed the final page of the survey which addressed psychosocial techniques were included in the study.

Those who did not reach the final section of the survey were not included. 50 surveys were disqualified, and the remaining 128 responses were used for this study.

Demographics

Figures 1 and 2 show the geographic regions where respondents were employed and trained. The investigators used a goodness-of-fit Chi-Square test to determine if the “region employed” demographics of the sample were representative of the 2008 Professional Status Survey conducted by the NSGC. The results of this analysis show that there is no cause to suspect that the sample was not representative ( $\chi^2(5) = 5.872$ ,  $p = .319$ ). The region where the largest numbers of respondents were employed is Region 4 (29%). Most respondents were trained in Region 2 (34%) and Region 4 (32%).

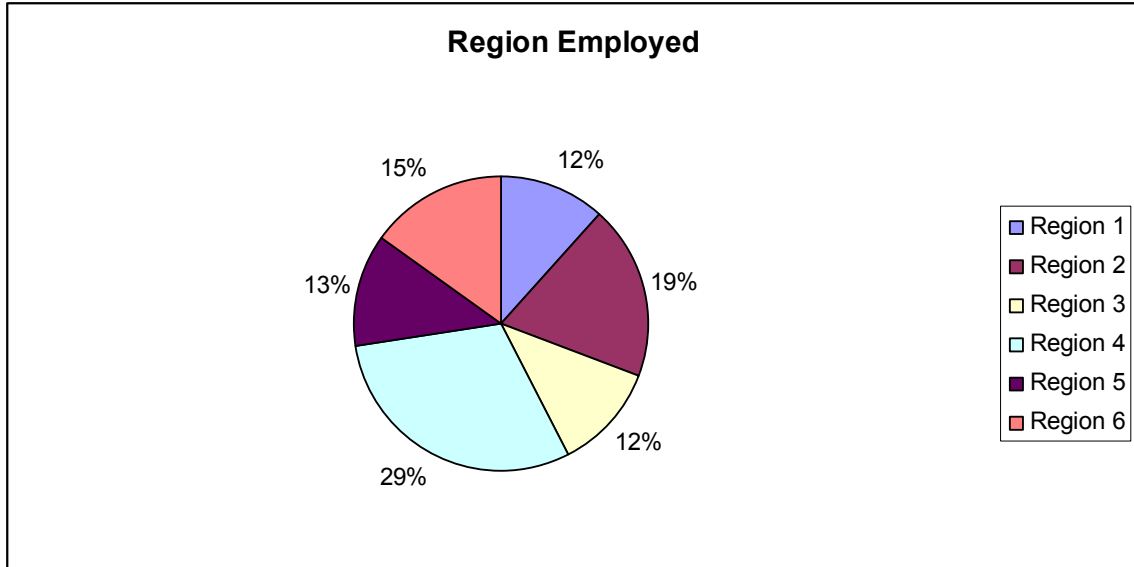


Figure 1. Region where participants are currently employed.

- Region 1: (CT, MA, ME, NH, RI, VT, Canadian Maritime Provinces)
- Region 2: (DC, DE, MD, NJ, NY, PA, VA, WV, Quebec, Puerto Rico, Virgin Islands)
- Region 3: (AL, FL, GA, KY, LA, MS, NC, SC, TN)
- Region 4: (AR, IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI, Ontario)
- Region 5: (AZ, CO, MT, NM, TX, UT, WY, Alberta, Manitoba, Saskatchewan)
- Region 6: (AK, CA, HI, ID, NV, OR, WA, British Columbia)

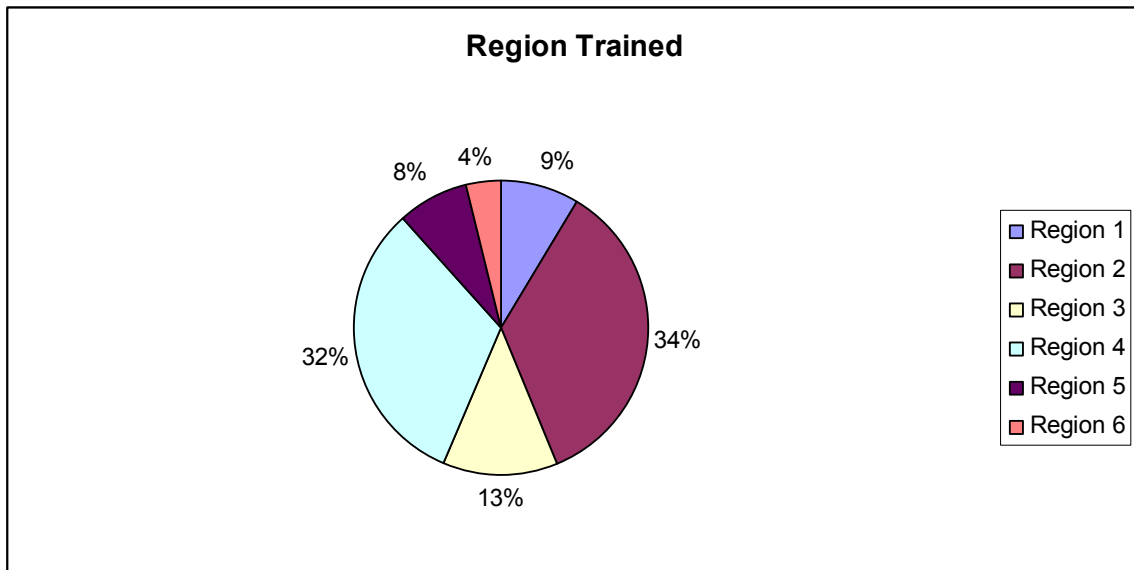


Figure 2. Region where participants' genetic counseling masters programs were located.

- Region 1: (CT, MA, ME, NH, RI, VT, Canadian Maritime Provinces)
- Region 2: (DC, DE, MD, NJ, NY, PA, VA, WV, Quebec, Puerto Rico, Virgin Islands)
- Region 3: (AL, FL, GA, KY, LA, MS, NC, SC, TN)
- Region 4: (AR, IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI, Ontario)
- Region 5: (AZ, CO, MT, NM, TX, UT, WY, Alberta, Manitoba, Saskatchewan)
- Region 6: (AK, CA, HI, ID, NV, OR, WA, British Columbia)



The respondents were asked to choose which setting (prenatal, pediatric, cancer, or adult) they spend the majority of their time in and then to consider that setting when answering the questions in this survey (Figure 3). The majority of respondents indicated prenatal as their main clinical setting (53%) which is typical of the genetic counseling population as a whole.

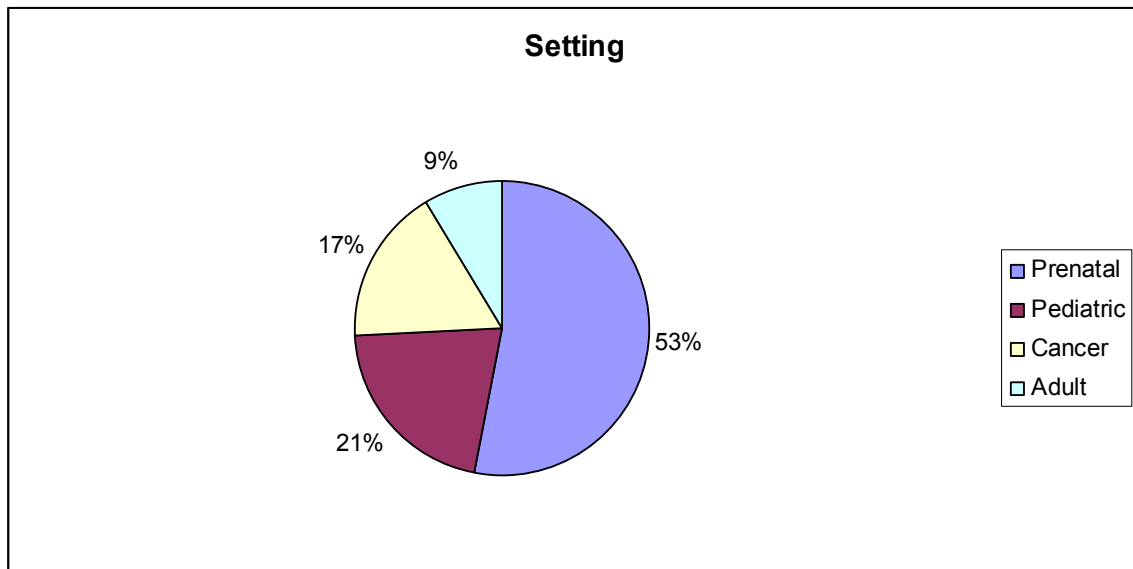


Figure 3. Primary clinical setting. This figure shows in which clinical setting the participants spent the majority of their time and would therefore be the setting on which they would base their answers to the survey questions.

The majority of respondents had less than 10 years of experience (mean of 6.5 years) and ranged from 0-30 years of experience (Figure 4).

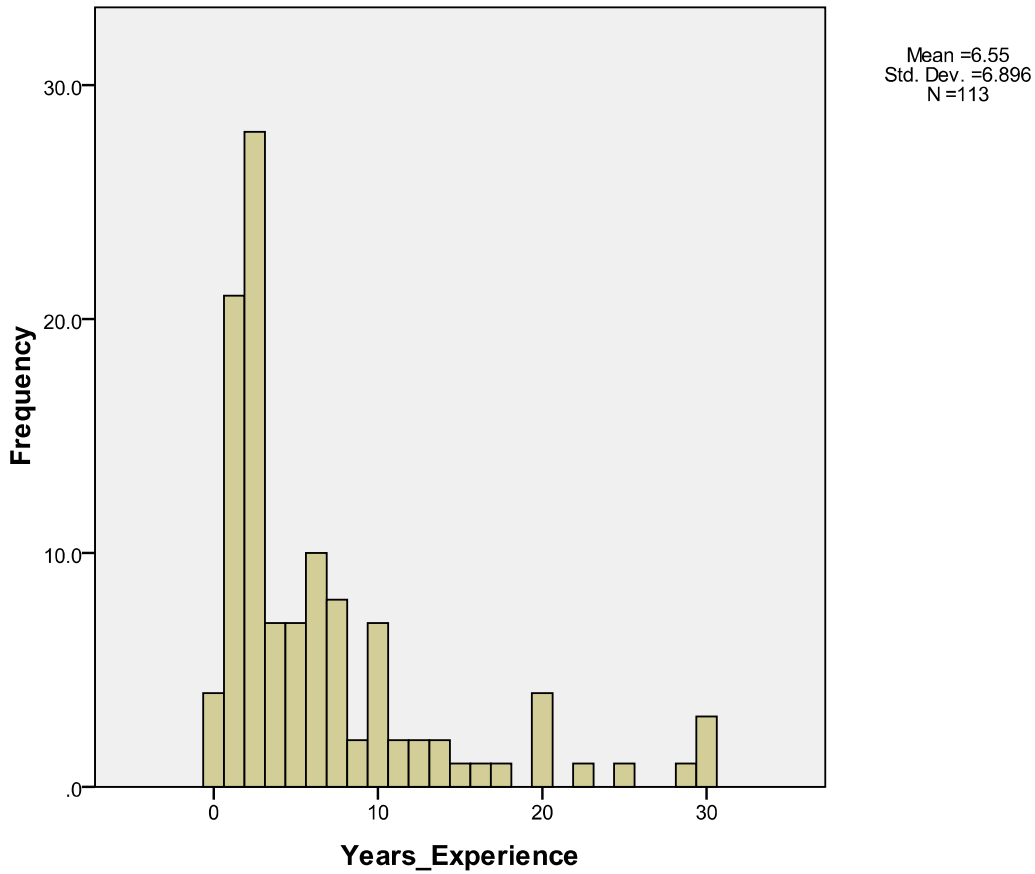


Figure 4. Years of experience. This graph shows the number of years of experience in genetic counseling of the respondents.

Investigators also asked about how the counselors allot their time in a session with a patient. Table 1 presents how much time is spent on different elements of a session. On average, the amount of time per session was 51 minutes. On average, the most time was spent on patient education (17 minutes) which is about 1/3 of the session. On average, counselors spent about 9 minutes of their session involved in psychosocial counseling elements, or 17.6% of their time.

Table 1. Number of Minutes Spent for Each Element of a Counseling Session

Element of the Session	Number and Percentage of Minutes Spent	
Contracting	4.4	7.8%
Medical and Family History	13.3	25.5%
Risk Assessment	7.7	15.7%
Patient Education	16.7	33.3%
Psychosocial Counseling Elements	9.1	17.6%

### Prioritizing

When respondents were asked to indicate why they choose to spend more time on one element of the session than another, there were four factors which captured the majority of responses. Counselors indicated that: different patients have different needs, the majority of what counselors do is patient education (for various reasons including that there needs to be informed consent and that patients are poorly informed about facts and need to be re-educated), the elements of the counseling session are not set up in discreet timeframes but that there is overlap between the elements, and lastly, they need more time to incorporate psychosocial counseling. The following are excerpts from the open response section which are representative of these factors:

*“Patients must have the necessary information in order to make informed decisions regarding their prenatal care. Depending on the case, more or less psychosocial counseling is necessary.”*

*“The amount of information needed to provide true informed consent for genetic testing. Psychosocial unfortunately takes a back seat to education due to time constraints.”*

*“I believe all aspects from contracting to ending of session require a psychosocial perspective. The information gleaned by the counselor in each of these sessions guides empathic discussion and risk concerns.”*

What is interesting to note, though, is that some respondents felt that all of the elements intertwined during a counseling session ... not just the psychosocial elements.

*“All aspects of the counseling session are wound into a fluid dialogue. It is no longer so much about parsing the session into pieces, as taught in school. It is about having a conversation. The more conversations, the more able to integrate the scientific and psychosocial aspects of the case into the session.”*

### Training

In the survey we asked participants to tell us the number of classes in psychosocial counseling that they had completed. This included classes in graduate school for genetic counseling and non-genetic counseling programs, as well as undergraduate classes. The frequency of the total number of psychosocial counseling classes that respondents had taken is shown below in Figure 5. The majority had taken two classes or less, most of which were graduate courses in a genetic counseling program

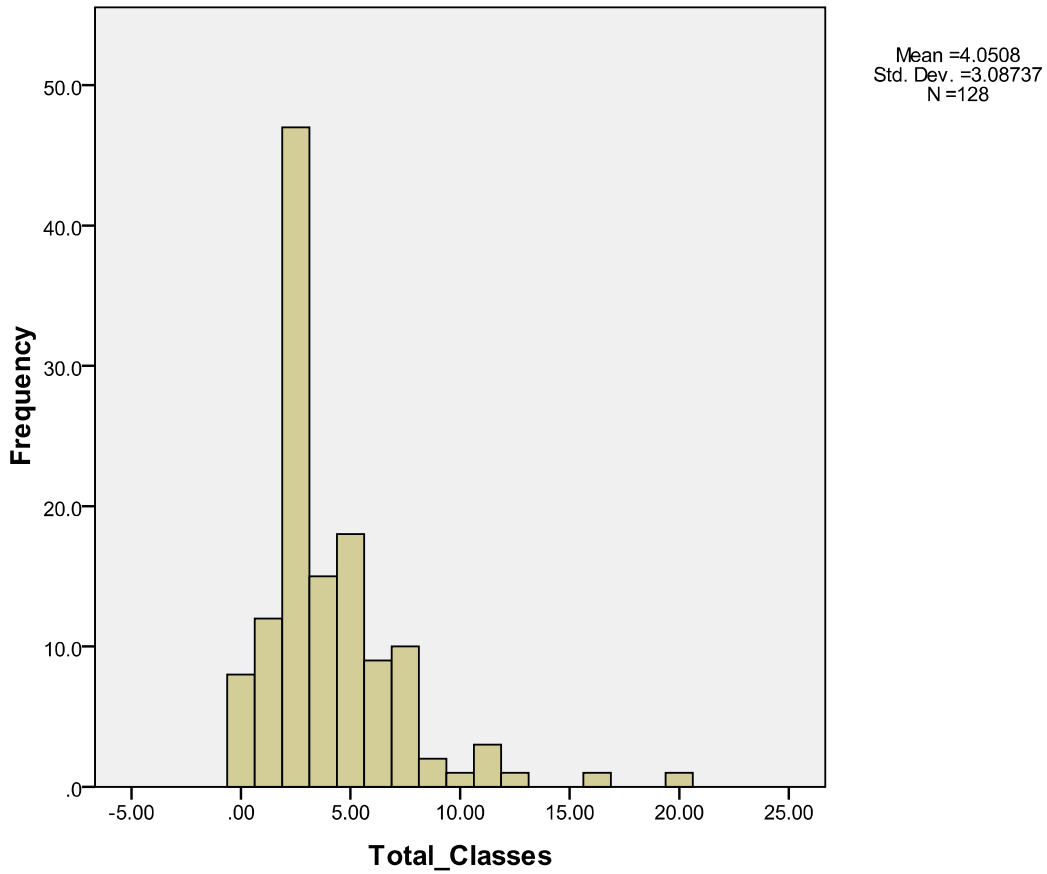


Figure 5. Total number of psychosocial counseling classes taken. This figure shows the frequencies of the total number of classes related to psychosocial counseling respondents had.

Table 2. Types of Classes in Which Respondents Participated

Type of Classes	Number and Percentage of Respondents who Participated in this Type of Class
Graduate School – Genetic Counseling Program	127/128 99.2%
Graduate School – Non-Genetic Counseling Program	14/128 10.9%
Undergraduate School	37/128 28.9%
Training Class for a Volunteer Position	6/128 4.7%

We also asked respondents to state approximately how many hours of additional training they received, including training for volunteer positions, continuing education seminars, supervision groups, and clinical rotations. The mean number of additional hours of training was 60 hours.

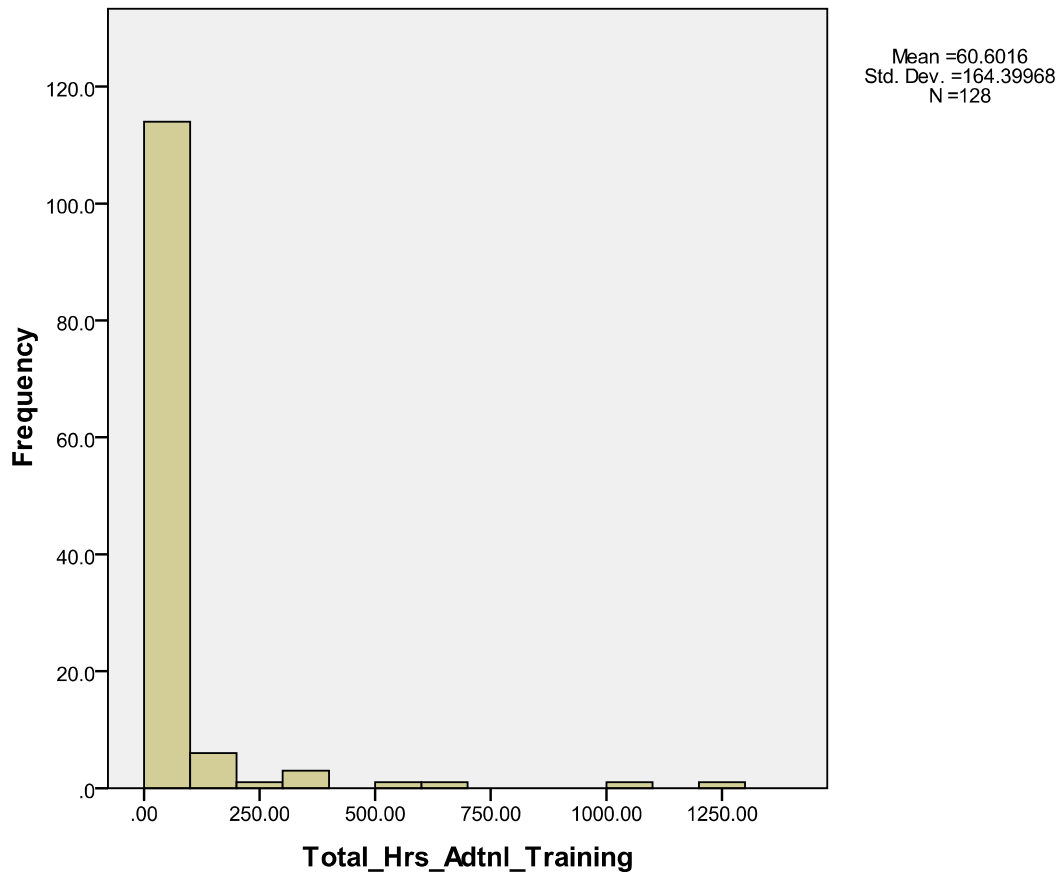


Figure 6. Total number of hours of additional psychosocial counseling training. This figure shows the frequency of additional hours of training each respondent had.

When asked what training in psychosocial counseling (classes or otherwise) was found to be the most beneficial, the three major themes were reported: clinical rotations with one-on-one supervision, psychosocial classes which are geared towards genetic counseling-specific issues, and practice using role playing. The following are excerpts from the open response section which are representative of these themes:

*“Classes that help adapt traditional psychological training techniques to genetic counseling specifically have been the most helpful. Trying to understand how to best use classic techniques when dealing with usually a one or two-session patient interaction can be challenging without some guidance for what things may be effective in those situations and what may not be given time constraints.”*

*“Supervision groups and classes which involve case discussions, role-playing, and re-working are the most helpful because they allow for the identification and practice of specific counseling skills and interventions to be applied in very specific scenarios.”*

### Techniques

We asked the respondents to answer Likert Scale questions about how often they used the following techniques in their clinical practice: empathy, acknowledgement, validation, unconditional positive regard, promoting competence and autonomy, reframing, role play, genograms, and genuineness. We also asked how useful they find these same techniques in their clinical practice. The results of these questions are found in Figures 7 and 8 below. Little difference was found in how useful respondents judged the techniques to be except for the techniques of role play and genograms. Again, little difference was found in how often respondents used the techniques in their clinical practice except for role play and genograms. Role play and genograms were rated much lower in both the level of use and in usefulness.

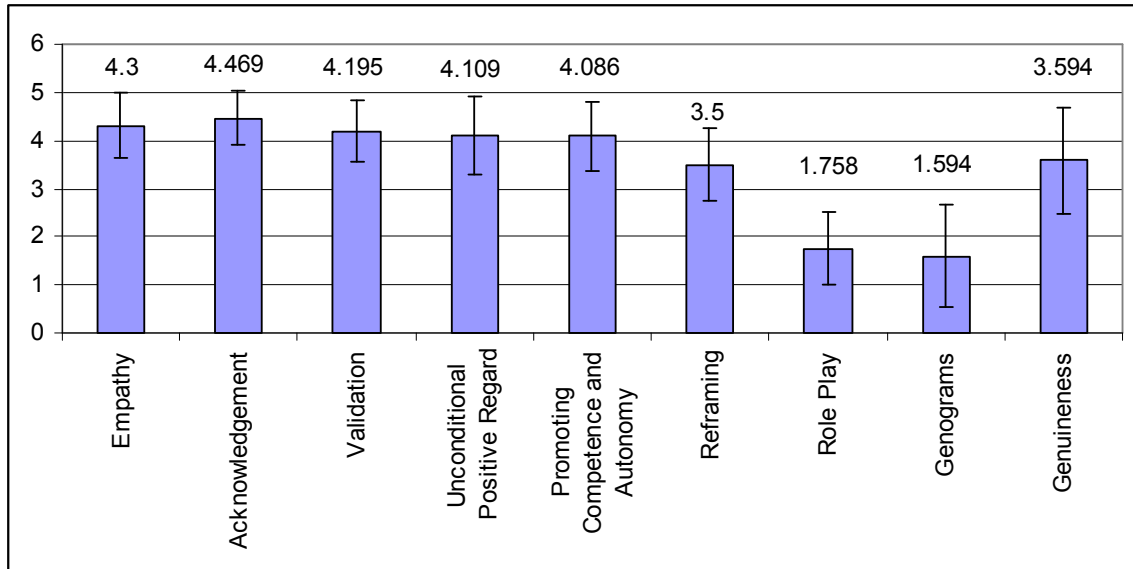


Figure 7. How often specific psychosocial counseling techniques are used. This figure shows the average rating of each technique as to how often it is used in clinical practice. The Likert Scale was calibrated from 1-5 with 1 being *never* and 5 being *always*.

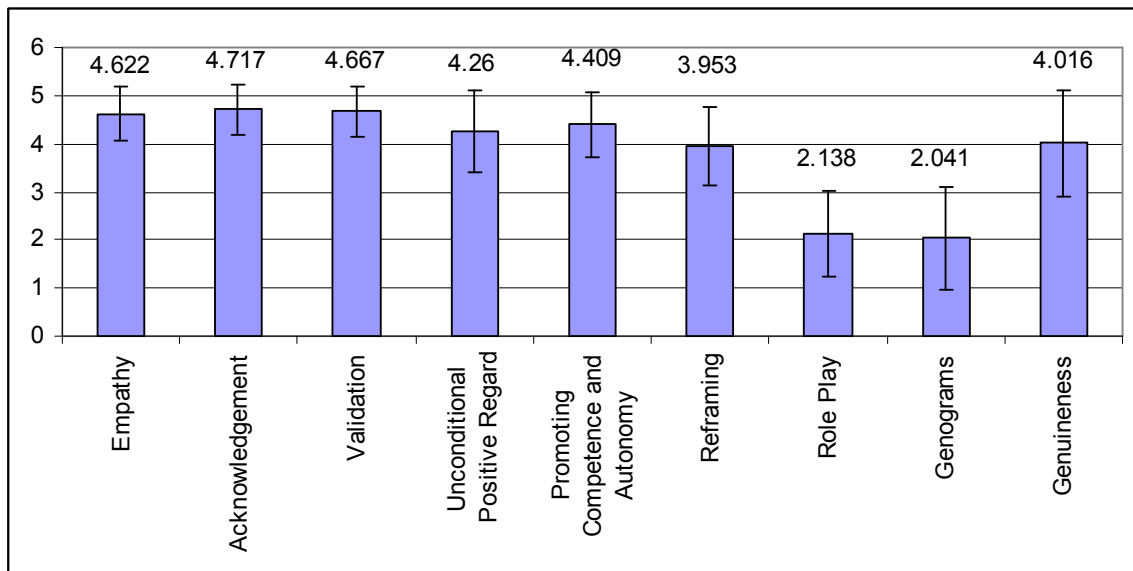


Figure 8. How useful specific psychosocial counseling techniques are in practice. This figure shows the average rating of each technique as to how useful it is in clinical practice. The Likert Scale was calibrated from 1-5 with 1 being *not at all useful* and 5 being *very useful*.

The investigators asked respondents to identify the three counseling techniques from the above figure which are the most useful to them (Table 3). The three techniques which were listed most often were acknowledgement (53 out of a total 212 responses), empathy (47 out of 212 responses), and validation (38 out of 212 responses).



Table 3. How Often the Technique was Listed in the Top Three in Terms of Usefulness

Counseling Technique	How Often the Technique was Listed
Empathy	47
Acknowledgement	53
Validation	38
Unconditional Positive Regard	22
Promoting Competence and Autonomy	25
Reframing	11
Role Play	1
Genograms	0
Genuineness	15
	Total Number of Responses: 212

### Comfort Level with Psychosocial Counseling

The investigators posed two Likert Scale questions regarding the participants' comfort level with psychosocial genetic counseling: What was your level of comfort with psychosocial genetic counseling after graduation? What is your current level of comfort with psychosocial genetic counseling? The scale was calibrated from 1-5 with 1 being *not at all comfortable* and 5 being *very comfortable*. The results of these queries are shown below in Figures 9 and 10. The mean level of comfort that counselors felt after graduation was 3. The counselors' current mean level of comfort was 4, showing an increase from *somewhat comfortable* to *moderately comfortable*.

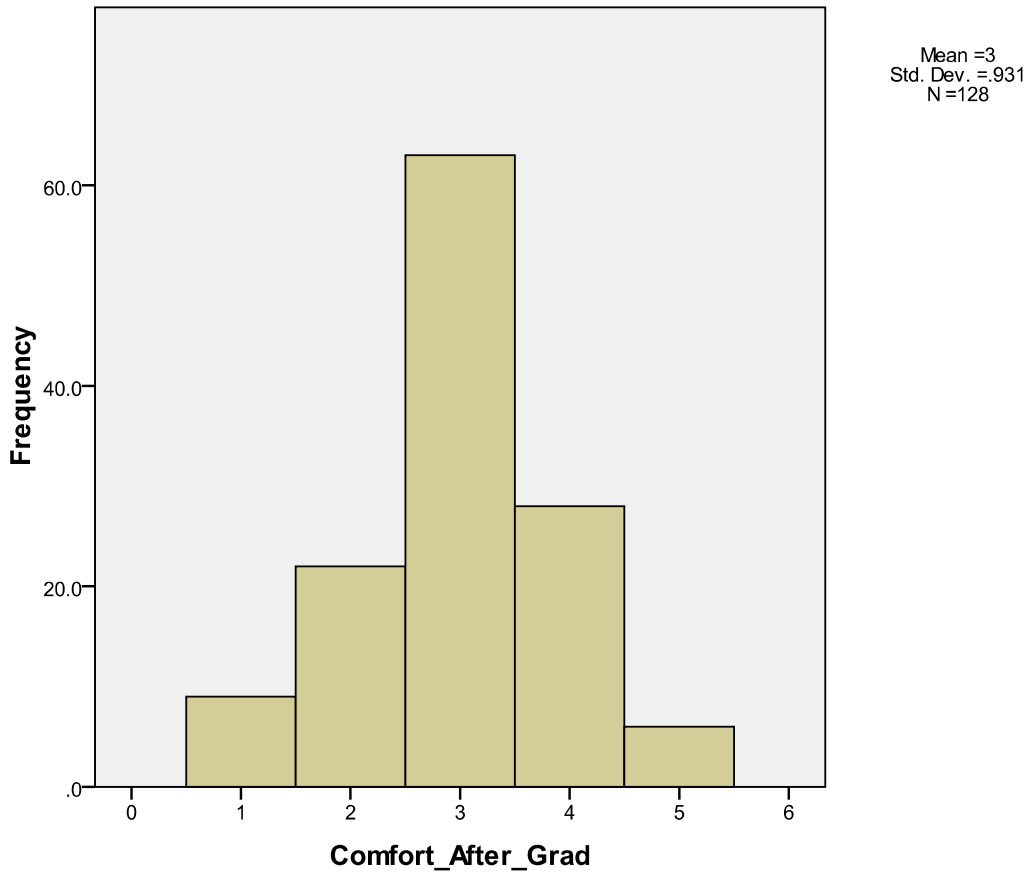


Figure 9. Level of comfort with psychosocial counseling after graduation. This figure shows the level of comfort with psychosocial genetic counseling after graduation where 1 is *not at all comfortable* and 5 is *very comfortable*.

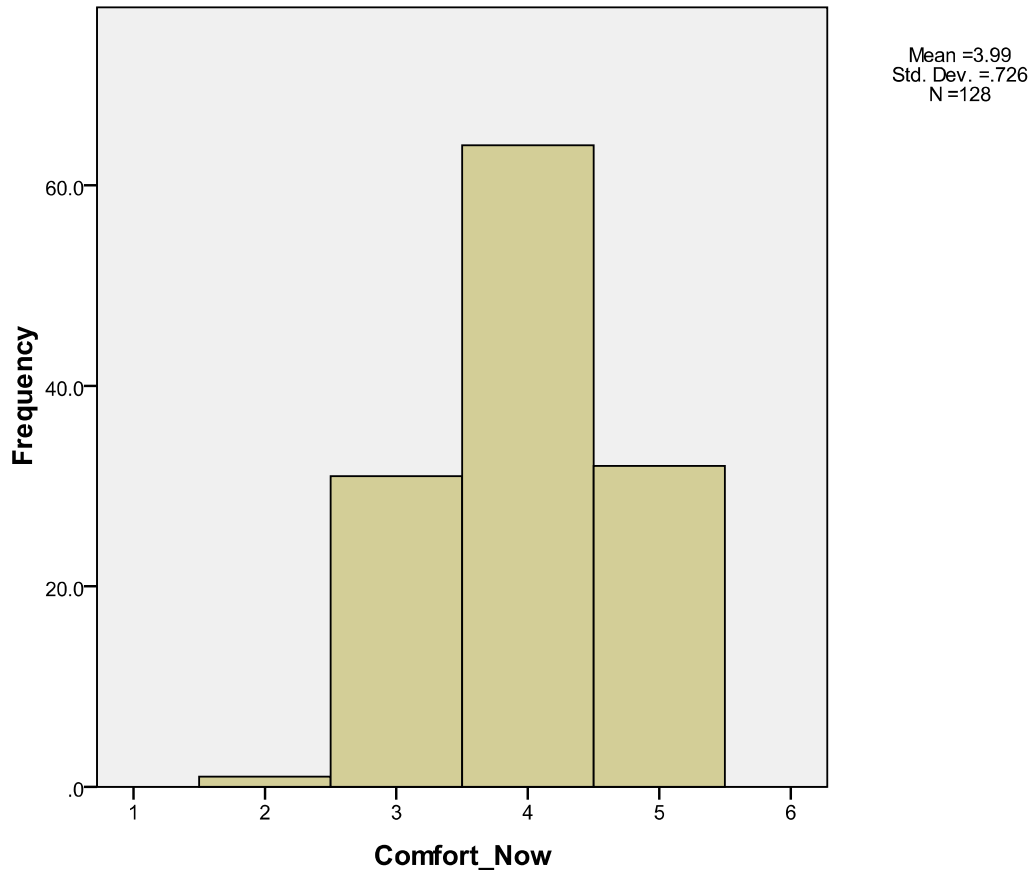


Figure 10. Current level of comfort with psychosocial counseling. This figure shows the current level of comfort with psychosocial genetic counseling where 1 is *not at all comfortable* and 5 is *very comfortable*.

We then analyzed the data to see which variables might correlate with the level of comfort the respondent currently feels with psychosocial genetic counseling. The variables that we took into consideration were: clinical setting, years of experience, the number of hours per month spent counseling, the number of psychosocial counseling classes taken, the number of hours of additional training in psychosocial counseling acquired, and the level of comfort with psychosocial genetic counseling after graduation. The only variable that had a significant relationship was the reported level of comfort after graduation ( $R=.385$ ,  $p<.001$ ). The higher the respondent rated the level of comfort after graduation, the higher the current level of comfort was rated.

**Discussion**Influences on Comfort Level with Psychosocial Counseling

We analyzed variables which might affect the current comfort level that a counselor feels with regards to psychosocial genetic counseling. We found that clinical setting, years of experience, the number of hours per month spent counseling, the number of psychosocial counseling classes taken, and the number of hours of additional training in psychosocial counseling acquired did not have a significant relationship with the current level of comfort with psychosocial genetic counseling. The single variable that was significant was the comfort level the respondents felt with psychosocial counseling after graduation. Counselors who ranked themselves as being more comfortable after graduation were significantly more likely to rank themselves as being more comfortable currently. Our hypothesis that the respondents who started at a higher level of comfort after graduation would report a higher current level of comfort was confirmed by the data. We expected that the other variables would also have a relationship with the current level of comfort with psychosocial counseling, but this was not the case.

Usefulness of the Counseling Techniques

When examining how often counseling techniques are used and how useful the selected techniques are, we can see that most were found to be quite useful and were used frequently in the respondents' clinical practice. The exceptions to this were role play and genograms. When asked which techniques were the least useful these two were almost

always mentioned. The main explanation given was that there is not enough time in a session for these two techniques to be executed well enough to be useful.

*“The information from a genogram is helpful to know in terms of how the patient views her situation and what life situations shape her perspectives, but from a practical standpoint I think a genogram would take too long to accurately complete and therefore not be very practical within a short timeframe for a session. Role play can certainly be useful, but I think the frequency with which it is used makes it less useful. Only with patients who are really struggling with decision making would I use role play.”*

### Rogerian Theory

One of the goals of this study was to determine whether the Rogerian client-centered theory was at the foundation of genetic counselors' psychosocial counseling practice. The three techniques most often identified with Rogerian client-centered theory are: empathy, unconditional positive regard, and genuineness. If Rogerian theory is the foundation of genetic counseling, we would expect that when respondents were asked which three techniques they found to be the most useful, the three Rogerian techniques would be listed most often. From the responses in this study it is shown that these three techniques are considered to be quite useful and are certainly incorporated into genetic counselors' clinical practice. However, many other techniques are also stated as being equally, if not more, useful. Psychosocial genetic counseling may have its roots in Rogerian theory. However, at this time the theoretical basis appears to have evolved. We have not determined whether counselors are using empathy, unconditional positive regard, and genuineness because they are proponents of Rogerian theory or whether these techniques are viewed simply as useful tools, in addition to many others. Further study is needed to determine whether genetic counseling is an amalgamation of useful techniques

with no underlying theory or whether it embodies an as-yet-undefined theory in its own right.

### Study Limitations

One major limitation of this study is that it can be assumed that genetic counselors who are more interested in psychosocial genetic counseling may have been more likely to choose to participate in this study. Therefore, this population may not be as representative of the whole population of genetic counselors as the authors would have liked.

Another limitation is that the answers to these survey questions are self-reported and may not be as accurate as the authors would have hoped due to their subjective nature. There may have been a bias toward social desirability. Also when rating comfort level, counselors may not objectively be able to rate how comfortable they feel.

This study population may not be representative of the whole genetic counselor population, so a larger study would be beneficial to identify whether these trends that we discovered in this study hold true.

### Implications for Future Research

There are many ways that future research could branch out from this study. One aspect that deserves more consideration is the amount and type of psychosocial genetic counseling training that is received in genetic counseling master's programs. This could include whether or not graduates feel that their training was satisfactory and a deeper inquiry into what types of classes they found to be most helpful in training.

Another area to investigate is a possible underlying psychosocial theoretical base of genetic counseling which would integrate both the techniques genetic counselors use as well as what counselors' values and priorities are when it comes to a genetic counseling session.

**Conclusion**

Psychosocial counseling is an integral part of the genetic counseling session. Authorities have questioned whether genetic counselors receive adequate training in this area. In addition, there is no consensus on whether or not there is an underlying counseling theory for genetic counseling. This study was aimed at determining how often certain counseling techniques are used in a genetic counseling session and priority of psychosocial counseling in a clinical session. Also we looked at what types of training genetic counselors have had and which, retrospectively, they find to be the most useful, and what variables influence how comfortable genetic counselors feel in regards to psychosocial counseling. Finally, we sought evidence regarding the influence of Rogerian theory on psychosocial genetic counseling.

In this study we found that most of the counseling techniques presented by the investigators (empathy, acknowledgement, validation, unconditional positive regard, promoting competence and autonomy, reframing, and genuineness) were identified as being useful in a genetic counseling session. Role playing and genograms were not seen to be as useful, perhaps due to the time limitations of the psychosocial components of a clinical session.

Patient education received the most amount of time in a session (approximately a third of the session) and some respondents did say that psychosocial counseling was sometimes cut short due to time constraints. Respondents also said that elements of the



counseling session, including psychosocial counseling, overlapped and were not present in discrete timeframes in the session.

When looking at different variables which might affect a counselor's current level of comfort with psychosocial genetic counseling, the only variable found to be significantly related was the level of comfort felt after graduation. It was found that the higher the initial level of comfort after graduation, the higher the current level of comfort tended to be.

If genetic counseling is based on Rogers' client-centered theory, when looking at which techniques were most useful in a genetic counseling session, we would expect to find that many counselors would list empathy, unconditional positive regard, and genuineness as the three most important techniques. What we found instead was that these techniques were certainly useful, but they were not the only valuable techniques. Therefore, we conclude that our data indicates that Rogerian theory may only be part of the theoretical base of genetic counseling.

**References**

- Eunpu, D. (1997). Systemically-based psychotherapeutic techniques in genetic counseling. *Journal of Genetic Counseling*, 6(1), 1-20.
- Kessler, S. (1980). The psychological paradigm shift in genetic counseling. *Social Biology*, 7(3), 167-185.
- Kessler, S. (1997). Psychological aspects of genetic counseling. X. Advanced counseling techniques. *Journal of Genetic Counseling*, 6(4), 379-392.
- Kessler, S. (1998). Psychological aspects of genetic counseling: XII. More on counseling skills. *Journal of Genetic Counseling*, 7(3), 263-278.
- Kessler, S. (1999). Psychological aspects of genetic counseling: XIII. Empathy and Decency. *Journal of Genetic Counseling*, 8(6), 333-343.
- McConkie-Rosell, A. and Sullivan, J. A. (1999). Genetic counseling – stress, coping, and the empowerment perspective. *Journal of Genetic Counseling*, 8(6), 345-357.
- O’Hanlon, B & Beadle, S. (1996). *A Guide to Possibility Land*. New York: Norton.
- Weil, J. (2000). *Psychosocial Genetic Counseling*. Oxford: Oxford University Press, Inc.

**Appendix A: Recruitment Notice****Recruitment Notice for Genetic Counselors Regarding Counseling Techniques**

You are invited to participate in this study concerning counseling techniques used by genetic counselors. This survey should take approximately 20 minutes to complete. You are eligible to take this anonymous online survey if you are currently employed as a genetic counselor and at least part of your time is spent in a clinical setting: prenatal, pediatric, cancer, or adult/general genetics.

Your participation in this study is completely voluntary, and survey responses are anonymous. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can either skip the question or withdraw from the survey at any point. Dr. David Rintell, a licensed psychologist, is available by telephone (617-734-6778) if you experience any adverse reactions to this survey.

If interested, please access the following website:

<https://www.surveymonkey.com/s/TVPYDS9>

This survey and its results will comprise the foundation for a research thesis, a requirement for the completion of a Master's of Science Degree in Genetic Counseling at Brandeis University. This study has been approved by the Brandeis University IRB.

If you have any questions or comments, please feel free to contact Natasha Barron at [nbarron@brandeis.edu](mailto:nbarron@brandeis.edu).

**Appendix B: Survey**

You are invited to participate in this study concerning counseling techniques used by genetic counselors. This survey should take approximately 20 minutes to complete. You are eligible to take this anonymous online survey if you are currently employed as a genetic counselor and at least part of your time is spent in a clinical setting: prenatal, pediatric, cancer, or adult/general genetics.

Your participation in this study is completely voluntary, and survey responses are anonymous. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can either skip the question or withdraw from the survey at any point. Dr. David Rintell, a licensed psychologist, is available by telephone (617-734-6778) if you experience any adverse reactions to this survey.

This survey and its results will comprise the foundation for a research thesis, a requirement for the completion of a Master's of Science Degree in Genetic Counseling at Brandeis University. This study has been approved by the Brandeis University IRB.

If you have any questions or comments, please feel free to contact Natasha Barron at nbarron@brandeis.edu.

Eligibility Criteria

You are eligible to take this anonymous online survey if you are currently employed as a genetic counselor and at least part of your time is spent in a clinical setting: prenatal, pediatric, cancer, or adult/general genetics.

Demographics

1. In which region are you currently employed?
  - a. Region 1 (CT, MA, ME, NH, RI, VT, Canadian Maritime Provinces)
  - b. Region 2 (DC, DE, MD, NJ, NY, PA, VA, WV, Quebec, Puerto Rico, Virgin Islands)
  - c. Region 3 (AL, FL, GA, KY, LA, MS, NC, SC, TN)
  - d. Region 4 (AR, IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI, Ontario)
  - e. Region 5 (AZ, CO, MT, NM, TX, UT, WY, Alberta, Manitoba, Saskatchewan)
  - f. Region 6 (AK, CA, HI, ID, NV, OR, WA, British Columbia)
  
2. In which region was the genetic counseling program that you attended?
  - a. Region 1 (CT, MA, ME, NH, RI, VT, Canadian Maritime Provinces)
  - b. Region 2 (DC, DE, MD, NJ, NY, PA, VA, WV, Quebec, Puerto Rico, Virgin Islands)
  - c. Region 3 (AL, FL, GA, KY, LA, MS, NC, SC, TN)
  - d. Region 4 (AR, IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI, Ontario)
  - e. Region 5 (AZ, CO, MT, NM, TX, UT, WY, Alberta, Manitoba, Saskatchewan)
  - f. Region 6 (AK, CA, HI, ID, NV, OR, WA, British Columbia)

3. How many years of experience do you have as a genetic counselor?

\_\_\_\_\_

4. Gender:

female

male

5. How many hours do you spend in each type of genetic counseling in an average **month**?

a. prenatal: \_\_\_\_\_

b. pediatric: \_\_\_\_\_

c. cancer: \_\_\_\_\_

d. adult: \_\_\_\_\_

e. specialty: \_\_\_\_\_

f. lab/research: \_\_\_\_\_

g. teaching: \_\_\_\_\_

h. administration: \_\_\_\_\_

i. other \_\_\_\_\_: \_\_\_\_\_

Please pick **one** clinical practice (prenatal, pediatric, cancer, adult) in which you spend the **majority** of your time to answer the following questions.

6. Which clinical practice area will you be using to answer the following questions?

a. prenatal

b. pediatric

c. cancer

d. adult

7. What is the average number of this type of case (that you chose in #6) that you see per week?

\_\_\_\_\_

8. On average, how many minutes do you spend with a patient in this setting?

\_\_\_\_\_

9. Of the number of minutes spent with a patient answered in question 8, how many minutes do you spend on:

Contracting: \_\_\_\_\_

Taking medical and family history: \_\_\_\_\_

Risk assessment: \_\_\_\_\_

Patient education: \_\_\_\_\_

Psychosocial counseling elements: \_\_\_\_\_

10. Please comment, if you wish, on why you prioritize your time as indicated in the answer to question #9:

### Psychosocial Counseling and Interest

The following questions are about the types of psychosocial counseling training you have received.

11a. **Classes** - What types of psychosocial counseling classes have you had? Please check all that apply. (Classes should only be counted if they were specifically geared to counseling. For example: an Intro to Psychology class does not count.)

- Graduate classes in a genetic counseling program
- Graduate classes in non-genetic counseling program
- Undergraduate classes
- Other \_\_\_\_\_

11b. For the types of classes which you selected in 11a., please answer how many of each type you experienced. If a class addressed psychosocial counseling part of the time, that would count as half a class. For example: if you took a genetic counseling theories and techniques class (1 class) and an Intro to Genetic Counseling (part of the class consisting of training in psychosocial counseling- 0.5) then the total number of classes you had would be 1.5

Number of graduate classes in a genetic counseling program \_\_\_\_\_

Number of graduate classes in a non-genetic counseling program \_\_\_\_\_

Number of undergraduate classes \_\_\_\_\_

Number of other type of classes \_\_\_\_\_

12a. **Training** - What types of additional psychosocial counseling training have you had? Please check all that apply.

- Training course for a job/volunteer position
- Continuing education seminars
- Supervision groups
- Clinical placements
- Other \_\_\_\_\_

12b. For the types of training that you selected in 12a., please list the number of each type you have had.

Number of training courses for a job/volunteer position \_\_\_\_\_

Number of continuing education seminars \_\_\_\_\_

Number of supervision groups \_\_\_\_\_

Number of clinical placements \_\_\_\_\_

Number of other (listed in 12a.) \_\_\_\_\_

12c. For the types of training that you selected in 12a., please list the approximate total number of hours of each type that you have had.

Training course for a job/volunteer position \_\_\_\_\_

Continuing education seminars \_\_\_\_\_

Supervision groups \_\_\_\_\_

Clinical placements \_\_\_\_\_

Other (listed in 12a.) \_\_\_\_\_

13. What types of training have you found to be the most helpful and why?

14. How interested would you be in additional training in psychosocial counseling?

1	2	3	4	5
Not at all Interested		Somewhat Interested		Very Interested

15. If you would be interested in additional training, what type? (Please check all that apply)

- local meetings
- online courses/training
- other(s) (please specify) \_\_\_\_\_

16. How comfortable did you feel regarding psychosocial counseling when entering the field after graduating from your program?

1	2	3	4	5
Not at all Comfortable		Somewhat Comfortable		Very Comfortable

17. How comfortable do you currently feel regarding psychosocial counseling?

1	2	3	4	5
Not at all Comfortable		Somewhat Comfortable		Very Comfortable

18. Please rank the following in order of importance in the role of a genetic counselor with 1 being the most important

- \_\_\_ Patient education
- \_\_\_ Facilitating decision-making
- \_\_\_ Listening to the patient's story
- \_\_\_ Providing support
- \_\_\_ Other \_\_\_\_\_



Psychosocial Techniques

In the following questions please refer to the definitions given below.

- Empathy-** An understanding, insofar as possible, of the counselee's lived reality (Weil, 2000)
- Acknowledgement-** Let clients know that you have heard and understood their suffering, their concerns, their felt-experience and their points of view (O'Hanlon and Beadle, 1996)
- Validation-** Validate and value clients' being and inner experiences (O'Hanlon and Beadle, 1996)
- Unconditional Positive Regard-** Respecting and accepting the counselee as a complete individual, including his or her strengths, weaknesses, and full range of feelings and behaviors (Weil, 2000)
- Promoting Competence and Autonomy-** Comments that highlight, support, and praise counselee's perceptions, actions, and coping mechanisms (Weil, 2000)
- Reframing-** Restating a situation in a manner that casts it in a more favorable light, broadens the counselee's perception of possible strengths and solutions, or normalizes what had been perceived as deficits or failings (Weil, 2000)
- Role Play-** Role playing allows the counselee(s) to try out or "walk through" an anticipated situation, with the genetic counselor commonly playing one of the roles. (Weil, 2000)
- Genogram-** A visual representation of the quality of relationships within the family and/or the intergenerational transmission of thoughts, attitudes, and beliefs within the family. The pedigree is used as the foundation with symbols for closeness and distance and other types of relationships built onto it. (Eunpu, 1997)
- Genuineness-** Involves the counselor's openness to her own emotional experiences in the interaction with the counselee, and a modulated but honest expression of this in her interactions with the counselee (Weil, 2000)

## References:

- Eunpu, D. (1997). Systemically-based psychotherapeutic techniques in genetic counseling. *Journal of Genetic Counseling*, 6(1), 1-20.
- O'Hanlon, B & Beadle, S. (1996). *A Guide to Possibility Land*. New York: Norton.
- Weil, J. (2000). *Psychosocial Genetic Counseling*. Oxford: Oxford University Press, Inc.

19. Please fill out the chart below, marking how often you use each technique in your genetic counseling practice.

Technique	Never	Rarely	Sometimes	Often	Always
Empathy					
Acknowledgement					
Validation					
Unconditional Positive Regard					
Promoting Competence and Autonomy					
Reframing					
Role Play					
Genograms					
Genuineness					

20. If there are any counseling techniques that you find valuable which are not listed in question 19 please list them below.

21. Please fill out the chart below, marking how useful you feel the given technique is in your genetic counseling practice.

Technique	Not Useful	Rarely Useful	Somewhat Useful	Often Useful	Very Useful
Empathy					
Acknowledgement					
Validation					
Unconditional Positive Regard					
Promoting Competence and Autonomy					
Reframing					
Role Play					
Genograms					
Genuineness					

22. If there are counseling techniques that you find useful which were not listed in question 21 please list them below.

23. Please briefly describe which three techniques from the previous tables are the **most** useful and why you find them to be the most useful?

24. Please briefly describe which three techniques from the previous tables are the **least** useful and why you find them to be the least useful?