

Empathy Training in Genetic Counseling: An Investigation of
How Genetic Counselors Learn to “Walk in their Patients’ Shoes”

A DISSERTATION

SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL
OF THE UNIVERSITY OF MINNESOTA

BY

Erin VandenLangenberg, M.A., M.P.H.

IN PARTIAL FULFILMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

Patricia McCarthy Veach, Ph.D., Advisor

August 2012

© Erin VandenLangenberg

Acknowledgements

This dissertation project was made possible by the support and assistance of many individuals. I would like to first and foremost thank my advisor, Pat McCarthy Veach, whose guidance, wisdom, and encouragement provided the foundation for this dissertation, as well as the cornerstone for my doctoral degree. I would also like to thank the members of my committee, Bonnie LeRoy, Caroline Burke, and Salina Renninger, for providing mentorship and for being a part of this collaboration. It has been a wonderful gift to work with each of you and I am grateful to have such exceptional professional role models. Thank you to Mica McLaughlin for her assistance in countless hours of data analysis. I would also like to thank the faculty members in the Counseling and Student Personnel Psychology program who have taught me to be analytical and intuitive. I would like to recognize Patricia Faris and Boyd Hartman for supporting me during graduate school through assistantships in their neuroscience lab. I would also like to thank my CSPP classmates and internship cohort for “getting it.” A special thank you to Sarah Beckmann for being the best editor and to Tricia Wallace for helping me when I needed “visuals.” Finally, this research would not be possible if it weren’t for the participants who donated their time and insight. Thank you for sharing your words with me.

On a personal note, I would like to thank many family and friends who provided reassurance and inspiration when it was needed. Thank you to my dad for teaching me to set goals and achieve them and to my mom for never letting me go hungry and for demonstrating the art of true empathic listening. Finally, I am eternally grateful to Ben West for his never-ending patience, steadfast partnership, and constant love and support.

Abstract

Empathy is a fundamental component of genetic counseling, but empirical data regarding the nature of genetic counselor empathy and empathy training methods are lacking. In this descriptive study, 60 genetic counselors, recruited through an online survey sent via the NSGC listserv, provided written definitions of empathy and responded to demographic questions. Additionally, genetic counselor program training directors nominated genetic counseling supervisors they perceived as focusing on empathy development when training students. Seventeen supervisors subsequently completed a similar online survey. Eleven genetic counselors and 16 supervisors completed follow a semi-structured, audio recorded phone interview to further investigate how genetic counselors define their professional use of empathy, to clarify training methods used to build empathy skills, and (for supervisors only) to determine methods supervisors use to evaluate empathy development. Inductive analysis of written definitions from the survey yielded themes consistent with Barrett-Lennard's (1981) 3-component model of empathy, namely, that genetic counselor's perceive empathy as: (1) the ability to *understand* another person's experience; (2) *communicating* that understanding; and (3) the other person's *perception* of being understood. Modified Consensual Qualitative Research (CQR; Hill, Thompson, & Williams, 1997; Hill, Knox, Thompson, Williams, & Hess, 2005) methods were used to analyze interview transcripts of genetic counselors and supervisors. Findings from this analysis showed that, similar to other health professions, genetic counselors and supervisors are more cognizant of Barrett-Lennard's (1981) Components 1 and 2. Genetic counselors reported learning their definition of empathy in their training program but honing their empathy skills

primarily through clinical experience. Supervisors reported training and experience were equally important in their both their own and their student supervisees' learning of empathy and skill development. Supervisors experienced increased comfort using empathy in clinical practice as they became more familiar with the concept and reported emphasizing empathy more with their students as they gained clinical and supervisory experience. Genetic counselors reported that with experience empathy became a tangible skill and a process used throughout the session. Both groups of interviewees described empathy as an evolving process. While some participants believed empathy might be innate, most reported empathy is something one is continuously learning and it is refined through training and experience. Post-genetic counseling session reflection and anticipatory guidance were most frequently mentioned by both groups as supervisory methods used to promote empathy development. Findings from this study were congruent with the Reciprocal Engagement Model (REM) of Genetic Counseling (McCarthy Veach, Bartels, & LeRoy, 2007), a published model of the genetic counseling process. A model of empathy in genetic counseling, the Reciprocal Engagement Model of Empathy (REM-E), is proposed to describe how empathy can be infused into genetic counseling practice. Additional findings, practice implications and research recommendations are presented.

Table of Contents

List of Tables	vii
List of Figures	viii
Chapter 1: Introduction	1
Definitions of Empathy in Helping Professions	2
Barrett-Lennard (1981) Model of Empathy	5
Clinical Practice and the Three Components of Empathy	6
Significance of the Present Study	15
Chapter 2: Literature Review	17
Can Empathy Be Taught?	17
How Is Empathy Taught?	21
Teaching Empathy in Medical Settings	21
Teaching Empathy in Mental Health Settings	37
Teaching Empathy in Genetic Counseling	52
Implications of Medical/Mental Health Literature for Genetic Counseling	57
Purpose of Present Study	59
Chapter 3: Methodology	61
Participant Recruitment	61
Instrumentation	63
Data Collection	65
Data Analysis	66
Bracketing Biases	67
Chapter 4: Results	69

Survey	69
Demographic Characteristics of Survey Respondents	69
Survey Respondents' Definitions of Empathy	73
Interviews	74
Demographic Characteristics of Interviews	74
Interview Characteristics	78
Qualitative Analysis of Interview Responses	79
Chapter 5: Discussion	124
Survey Results: Genetic Counselors Definitions of Empathy	125
Genetic Counselors' and Supervisors' Understanding of Empathy	126
Descriptions of What Empathy Looks Like in Sessions	129
Training Program Methods for Fostering Empathy	133
Supervisors Methods for Fostering Empathy	134
Supervisor Evaluation of Empathy	136
Study Strengths and Limitations	136
Practice and Training Implications	138
Research Recommendations	145
References	147
Appendix A: IRB Approval	159
Appendix B: Invitation for Genetic Counselors	161
Appendix C: Survey for Genetic Counselors and Supervisors	163
Appendix D: Interview Protocol for Genetic Counselors	166
Appendix E: Email to Program Directors	167

Appendix F: Invitation to Supervisors	168
Appendix G: Interview Protocol for Supervisors	170

List of Tables

Table 1	Studies Reporting Teaching Empathy in Medical Settings	22
Table 2	Studies Reporting Teaching Empathy in Mental Health Settings	41
Table 3	Studies with Empathy Teaching Implications in Genetic Counseling	53
Table 4	Demographic Characteristics of Survey Respondents	69
Table 5	Demographic Characteristics of Interview Respondents	75
Table 6	Domains and Categories by Interview Question	79

List of Figures

Figure 1. Study Recruitment and Participation Flowchart	62
Figure 2. Reciprocal Engagement Model of Genetic Counseling	140
Figure 3. Reciprocal Engagement Model of Empathy in Genetic Counseling	141

Chapter 1: Introduction

Empathy is considered by many to be a critical component of a successful helping relationship. In particular, ever since Carl Rogers (1957) first championed empathy as a necessary and sufficient condition for behavior change, it has become regarded as one of the fundamental elements of psychological counseling sessions (Kurtz & Grummon, 1972). Empathy is also thought to contribute significantly in medical settings. For instance, Dow, Leong, Anderson, and Wenzel (2007) called empathy “vital” to physicians, noting it creates a sense of connectedness integral to a therapeutic physician-patient relationship (p. 1114).

Resta et al. (2006) define genetic counseling as “the process of helping people understand and adapt to the medical, psychological, and familial implications of the genetic contributions to disease” (p. 79). Genetic counseling is a unique type of health care that combines medical information with cognitive, affective, behavioral, and socio/cultural dimensions of counseling (McCarthy Veach, Bartels, & LeRoy, 2007). Similar to the mental and medical health fields, within genetic counseling empathy is also regarded as a key aspect to serving clients (Kao, McCarthy Veach, & LeRoy, 2010; McCarthy Veach et al., 2007). Furthermore, with experience, genetic counselors continue to have increased appreciation for the role of empathy in their sessions (Runyon, Zahm, McCarthy Veach, MacFarlane, & LeRoy, 2010).

Despite its importance in helping relationships, empathy remains a vague construct and is frequently confused with sympathy. Scott Vincent (2005) compared these two by noting that sympathy denotes feeling *towards another* while empathy refers to having insight into how another is feeling by *projecting into* another person’s

emotional experience. Given empathy's value in the clinical arenas described above, it seems important to understand how empathy is conceptualized in these settings.

Accordingly, in this chapter the following topics are reviewed: 1) definitions of empathy as they are used in medical, mental health, and genetic counseling settings, 2) Barrett-Lennard's Model of Empathy, 3) clinical use of Barrett-Lennard's Model of Empathy, and 4) the purpose and significance of the present study.

Definitions of Empathy in Helping Professions

Largely because empathy is such a complex phenomenon, it has been conceptualized in many different ways, often dependent on the setting. Within medical literature, empathy is often referred to as "clinical empathy" to identify its use, both as a skill and a process within the medical setting. Several groups have offered definitions, including the Society for General Internal Medicine, which defines empathy as "the act of correctly acknowledging the emotional state of another without experiencing that state oneself" (Markakis, Frankel, Beckman, & Suchman, 1999, as cited in Halpern, 2003, p. 670). In one of the first chapters written on the topic, Spiro (1992) differentiated sympathy, which involves physician compassion and a desire to help, from empathy, which involves an awareness of "I *could be* you" with regard to the patient (p. 8). Halpern (2003), a psychiatrist, offered her perspective that empathy involves being moved by the experiences of others and does not serve "merely to label emotional states, but to recognize what it feels like to experience something" (p. 671). Collectively, these definitions of empathy indicate that, in the medical context, empathy is perceived as correctly identifying another's emotional experience and having affective and cognitive

reactions, but with a certain degree of detachment (i.e., “I *could* be you” versus “I *am* you”).

Within the mental health literature, empathy’s importance to therapeutic relationships has been discussed since the beginning of the 20th century when Titchener coined the term. He defined empathy as “to feel one’s way into” another’s mental process through reasoning and examining one’s own mental state (Wispe, 1987, p. 18). Since that time, the use of empathy in counseling settings has been well documented, although the definitions of this construct vary. Certain definitions correspond to different theories of counseling and psychotherapy. For example, Carl Rogers (1959), who pioneered Person-Centered therapy, defined empathy as “the ability to perceive the internal frame of reference of another with accuracy and the emotional components and meanings which pertain thereto as if one were the person, but without losing the ‘as if’ condition” (p. 210). From a psychoanalytic perspective, Freud (1955) conceptualized empathy as “the mechanism of which by means we are enabled to take up any attitude at all toward another mental life” (p. 110). Knowing these different definitions is valuable in psychological counseling, where a practitioner’s theoretical orientation often gives context to both the type and frequency of empathy used. Despite theoretical differences, the various definitions of empathy share certain similarities. Comparable to medical definitions of empathy, mental health definitions describe empathy as both affective and cognitive processes in which clinician detachment remains a key factor.

Empathy may be defined differently in genetic counseling, due to the contextual variables that differentiate this service from either a medical or a counseling appointment. Yet, to date there is no *universally accepted* definition of empathy specific to genetic

counseling. To begin to understand empathy in this context, Kao and colleagues (2010) reported the results of dissertation research investigating how genetic counselors use empathy in genetic counseling sessions. Their results provide an initial empirical platform for understanding the nature and role of empathy in this realm. They found that genetic counselors use empathy to express the genetic counselor's understanding of a patient's situation, provide support, and help a patient cope with their emotional reactions. An extension of empathy, therefore, may be an enhanced genetic counselor-patient relationship, which is a central tenant of genetic counseling, according to the Reciprocal Engagement Model (REM) of Genetic Counseling proposed by McCarthy Veach et al (2007). This tenant states that "the relationship is at the core of the genetic counseling process...[and] serves as a conduit, providing an alliance in which the patient feels supported, cared about, connected, and validated" (McCarthy Veach et al., 2007, p. 725). Kao and colleagues (2010) findings support this model and extrapolate that it is because of this supportive and understanding relationship that patients can hear the medical information and proceed with decision-making.

From a theoretical perspective, Kessler's (1999) conceptualization of empathy in genetic counseling is a landmark paper. His theoretical perspective is congruent with the findings of Kao et al. (2010). Kessler emphasizes the importance of understanding a patient and conveying that understanding as a means to help patients cope. He describes how genetic counselors can use counseling procedures to empower patients, practice decency and thoughtfulness, and provide positive reinforcement. Kessler notes that these techniques borrowed from the counseling field are as important as the provision of information in genetic counseling. Further, he adds that these counseling methods help

patients reach decisions and deal with the repercussions of those decisions. In this way, Kessler describes the empathic process in genetic counseling as the application of counseling techniques to enhance understanding, relieve suffering, and help patients take the next steps with genetic information.

Another prevalent conceptualization of genetic counselor empathy is described in two chapters of a genetic counseling basic skills book (McCarthy Veach, LeRoy, & Bartels, 2003). In that context, McCarthy Veach et al. (2003) draw upon Barrett-Lennard's (1981) Model of Empathy in describing genetic counselor empathy. As this model provides a definition of empathy in a therapeutic relationship that can be operationalized, it is useful in a research setting for studying empathy in clinical contexts. Therefore, the Barrett-Lennard Model of Empathy is described in greater detail next.

Barrett-Lennard Model of Empathy

Barrett-Lennard (1981) proposed a widely accepted empathy model consisting of a three-component cycle. In this cycle, an *empathizer* attends to the needs of the *receiver* who shares his/her experiences. The empathizer resonates with those experiences and then communicates empathy back to the receiver. Finally, the receiver hears the empathizer's expression of empathy and provides feedback regarding the accuracy of that empathic expression. McCarthy Veach et al. (2003) express these components of empathy in the following questions (p. 51):

Component 1. Can I sense what you experience?

Component 2. Can I communicate this sense to you?

Component 3. Can you perceive this communication as my understanding you/your experience?

These authors assert that empathy “consists of understanding what another person is experiencing and communicating that understanding to the person” (McCarthy Veach et al., 2003, p. 51), along with the recipient’s perception of that understanding.

Clinical Practice in Medical and Mental Health and the Three Components of Empathy

This section contains an overview of research on empathy within the medical, mental health, and genetic counseling fields as they pertain to the Barrett-Lennard Model of Empathy.

Empathic understanding. Findings in psychology support the notion that mental health practitioners are skilled at empathic understanding, the first component of Barrett-Lennard’s (1981) three-component cycle. For example, Hassenstab, Dziobek, Rogers, Wolf, and Convit (2007) found that therapists performed significantly better than controls on objective measures of empathy, including the *Reading the Mind in the Eyes* test (Eyes; Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001), the Eckman/Friesen Facial Expressions of Emotions Test (Faces; Eckman & Friesen, 1971), Movie for the Assessment of Social Cognition (MASC; Dziobek et al., 2006), and the Interpersonal Reactivity Index (IRI; Davis, 1983). They concluded that psychotherapists have superior abilities in identifying others’ mental states conveyed through language, and they can better manage their own personal distress in emotionally charged situations. However, one question that remains is the extent to which they enter their profession possessing these abilities versus developing them through training and clinical experience. Nevertheless, it appears training and experience do not diminish their empathic understanding.

In contrast, several studies in the medical literature suggest clinical exposure leads to more negative attitudes towards patients and a decline in empathy by medical students. For example, in their qualitative study of seven physicians' experiences of empathy in Taiwan, Lin, Hsu, and Chong (2008) found evidence that physicians appeared disengaged from their patients. Six of these experienced emergency room doctors (M = 10 years clinical experience) reportedly "did not have emotional reactions to patients' situations" (p. 148) and tended to "take a neutral stand to understand the patient but remain detached from their worries" (p. 148). As this study only offers a snapshot of the physicians' empathic interactions, it is unknown whether these findings represent a decline over the course of their training and professional work. However, some researchers suggest that empathy decline is typical in medical culture (Spencer, 2004). For example, Spiro (1992) noted that "students start out with much empathy and genuine love...however, they learn to mask their feelings, or worse, deny them. They learn detachment and equanimity" (p. 843). Findings from Hojat et al. (2004) support this notion, as they found medical students might become compromised in their ability to experience patients' feelings. They administered the Jefferson Scale of Physician Empathy (JSPE; Hojat et al., 2001) to medical students prior to starting their first round of clinical rotations and one-year later. There was a small, but statistically significant, decline in their total empathy score at the one-year follow-up. These studies suggest individuals may enter a medical profession possessing strong empathic understanding but learn through clinical experience to become restrictive of that understanding.

Although no published studies directly assess personality characteristics associated with empathic understanding in genetic counselors, research on compassion

fatigue [e.g., feeling overwhelmed by repeated empathic engagement with clients and client suffering (Figley, 2002)] suggests that genetic counselors do frequently engage in empathic understanding with their clients. For instance, Benoit, McCarthy Veach, and LeRoy (2007) conducted focus group interviews with 12 genetic counselors to investigate the nature of compassion fatigue. Their findings showed that genetic counselors spent time in the interview discussing their ability to care for their patients, including times when they felt emotionally invested and times when they missed opportunities to invest. Additionally, dealing with the intense emotions that frequently arise in genetic counseling sessions has been identified as one of the challenges of the role of the genetic counselor (Bower, McCarthy Veach, Bartels, & LeRoy, 2002). These results speak to the ability of genetic counselors to place themselves in the shoes of their patients and experience empathic understanding.

As mentioned previously, both medical and mental health definitions of empathy describe a cognitive process that allows practitioners to remain detached emotionally from the patient. The above studies demonstrate that practitioners in mental health and medical health fields possess an array of attitudes and abilities regarding empathic understanding. Research in genetic counseling also suggests that genetic counselors regularly engage in empathic understanding in their profession, as indicated by their risk of experiencing compassion fatigue and the reported challenges of being overwhelmed by intense emotions in session (cf. Udipi, McCarthy Veach, Kao, & LeRoy, 2007). It is this investigator's contention that this first component of the empathy model involves a delicate balance. That is, a practitioner must walk a fine line between becoming

overwhelmed by another person's experience and being a neutral "bystander" when attempting empathic understanding.

Empathic expression. The second component of Barrett-Lennard's (1981) model concerns the ability to express one's empathic understanding. The physicians in Lin et al.'s (2008) study reported being able to express empathy, particularly related to patients' physiological distress (i.e., they asked about physical conditions and expressed concern about illnesses). They were less likely to express empathy regarding patients' psychological issues. Shapiro (2002) found that physicians advocated using both nonverbal skills (e.g., eye contact, appropriate touch, mirroring the patient's body language) and verbal skills (e.g., giving feedback, normalizing, avoiding interrupting) to express empathy to their patients. They also used reflective listening techniques, such as clarifying and paraphrasing. The results of these studies point to content areas for empathic expression and the communication skills that can be taught to maximize clinicians' ability to express empathy to patients.

Similarly, empathy expression is a major focus of many basic counseling courses in other human services professions. Counseling curricula generally identify two types of empathy: primary and advanced. Primary empathy demonstrates an initial understanding of the client's experience, whereas advanced empathy expresses a deeper understanding of the underlying facets of an individual's experience (McCarthy Veach et al., 2003). Nonverbal behaviors, such as physical attending (the clinician's observable behaviors) and psychological attending (the clinician's awareness/interpretation of the client's behaviors), are also used to convey engagement in the session and to demonstrate the clinician is "in tune" with a client (McCarthy Veach et al., 2003).

The importance of expressing understanding is highlighted by many psychologists (e.g., Rogers, 1980; Truax & Carkhuff, 1967), suggesting that empathy is more than being attuned to the feelings of a client but also involves “the ability to communicate [the therapist’s] understanding of the other person’s feelings and the reasons for his feelings” (Aspey, 1975, p. 11). Lyons-Halaris (1979) found that psychiatric nurses who were perceived as being higher in empathy were more expressive, demonstrating interest and support, whereas low-empathy nurses used more non-verbal forms of empathy. Similarly, counselors who were perceived as higher in empathy focused on the here-and-now and emphasized the client’s positive coping skills, whereas therapists perceived as being lower in empathy were more likely to discuss pathology (Mitchell & Berenson, 1970).

Duric et al. (2003) measured empathic expression in sessions with geneticists and genetic counselors during 111 first consultations with patients at risk for breast cancer. The researchers audio recorded sessions of five geneticists and six genetic counselors and the sessions were transcribed and coded for emotional cues provided by the patients. The patients completed pre- and post-session surveys to assess their level of distress and their satisfaction with the services they received. The providers’ responses to the patients’ emotional cues were rated using Carkhuff and Pierce’s (1975) levels of empathy, including: Level 1) No response, ignoring; Level 2) Responding to content only; Level 3) Responding to feeling; and Level 4) Responding to feeling and invites elaboration. The findings showed that out of the 111 consultations, patients provided emotional cues in 64 of them, with the median number of cues being one per session. Following emotional cues, the providers responded to the feeling 46% of the time, while in 32% of the

instances, they invited further elaboration. The remainder of the responses to emotional cues consisted of an ignoring response (27%), or a response to content only (27%). The researchers found that when the provider responded to the feeling and conveyed their understanding, the patients were more likely to disclose additional emotional content by providing subsequent emotional cues. Secondary measures showed that while the patients' satisfaction was not related to the nature of their provider's response to the emotional cue (i.e., the level), when providers responded to the feeling conveyed, patients' ratings of depression on a post-session survey decreased significantly. These findings suggest providers working in genetic clinics are regularly using empathic expression to convey their understanding of content and feelings and they also frequently use empathy to further explore the patient's emotions. This conclusion is tentative, however, as it is based on only 11 providers.

Findings described in this section on empathic expression suggest that providers do tend to respond with similar techniques to emotional cues from their patients. However, the foci of empathy expression may differ. For instance, Lin and colleagues (2008) found that physicians tend to express empathy with regard to physical conditions, whereas psychotherapists may express empathy about psychological issues (e.g., feelings). Genetic counselors, on the other hand, were reported to respond to emotional cues by discussing both the medical information and the patient's feelings. Notably, when genetic counselors and geneticists did respond to emotional cues by identifying and/or exploring feelings, patient disclosure increased, patients tended to express additional emotional content, and they later reported reduced depressive symptoms

(Duric et al., 2003). These findings suggest that empathy expression is a skill found across the scope of medical and mental health practice.

Received empathy. The third component of Barrett-Lennard's model refers to the patient's perception of the clinician's empathic understanding/expression. Numerous studies demonstrate that a client's receipt of empathy is strongly correlated with positive outcomes in therapy (Ahn & Wampold, 2001; Lambert & Barley, 2001). In a review of outcome-based research, Lambert and Barley (2001) concluded that positive client outcomes occur when clients perceive their counselor as displaying facilitative conditions that include empathy. They defined empathic understanding as "...the degree to which the therapist is successful in communicating awareness and understanding of the client's current experience in language that is attuned to that client" (Lambert and Barley, 2001, p. 22). They further concluded that empathy leads to clients feeling understood and accepted, thus promoting a stronger therapeutic relationship (working alliance). These authors hypothesized that the "...correlation of measures of empathy with client outcome will most likely be higher as we understand more about what constitutes an empathic response for the client" (Lambert and Barley, 2001, p. 24). In other words, research is needed to understand how clients perceive and experience counselor empathy.

Bachelor (1988) attempted to provide a clearer conceptualization of empathy as clients in therapy perceive it. In her qualitative study, 27 clients perceived four different types of therapist empathy: cognitive, affective, sharing, and nurturant. *Cognitive empathy* refers to therapists accurately recognizing the client's inner experience and expressing this understanding via verbal or non-verbal modes. *Affective empathy* refers to clients' perceptions of the therapist as participating in their emotional state and/or

being “in tune” with them. Sometimes affective empathy was conveyed through therapist verbal expression, such as self-disclosure. *Sharing empathy* refers to perceiving a therapist as expressing personal opinions or experiences with regards to the client’s situation. Clients perceived this type of empathy through verbal expression. Finally, *nurturant empathy* refers to the empathic presence that is created by the therapist. In contrast to sharing empathy, nurturant empathy refers to the therapist’s nonverbal attending behaviors that lead to client perceptions of empathic listening and understanding. Bachelor found that 44% of clients favored the cognitive mode of empathy, but the remaining 56% preferred one or more of the other forms. Thus, the healing effects of received empathy may be optimized when therapists express their empathy in the client’s preferred mode (i.e., cognitive, affective, shared, and/or nurturant), which leads to a more positive reception of the expressed understanding.

Perceived empathy within a medical context is regarded as important, although patients’ perceptions of their providers’ empathic understanding have rarely been investigated. Two recent studies assessed patients’ perceptions of physician empathy. Glaser, Markham, Adler, McManus, and Hojat (2007) administered self-report instruments to medical resident and patient dyads ($n = 36$ physicians, $n = 90$ patients) asking the residents to rate their provision of empathy, and patients to rate their perceptions of empathy. The two ratings revealed a statistically significant relationship between what the physicians believed they were offering and what patients were receiving with regards to empathy. Further, patients reported that physicians frequently inquired about their feelings regarding their health problems and took the patients’ wishes into consideration when making clinical decisions, demonstrating they heard the patients.

In contrast, Lin et al. (2008) found less favorable patient perceptions of empathy for seven emergency room physicians in Taiwan. Although the providers believed they were expressing empathy, their patients reported the providers were unaware of whether the empathy was received. For instance, when patients felt their providers were not being empathic, they covertly expressed this lack of empathic understanding (e.g., complaining, giving negative responses, and other indirect modes). Lin et al. (2008) recommended physicians be more reflective about the feedback they receive from patients following an empathic expression to assess whether or not their empathic responses are being perceived accurately.

Similar to the medical and mental health literature, research on patients' receipt of genetic counselor empathic expression is very limited. McCarthy Veach, Truesdell, LeRoy and Bartels (1999) conducted a study to explore patients' perceptions of genetic counseling. Relating to patient affect during the genetic counseling session, 27 of 28 patients identified within-session feelings (one patient reported not feeling anything). They collectively identified 43 different emotions experienced in session. While most of the feelings identified were negative, some patients identified positive emotions, including feeling comfortable, curious, relieved, and supported. These positive feelings may result from feeling heard by the clinician. For instance, within this study, 85% of the patients reported that their genetic counselor listened adequately, and 57% felt supported by their provider. While patient perception of genetic counselor expression was not measured directly, it may be that the in-session feelings identified by the patients resulted from empathy interactions.

Summary. Medical, mental health, and genetic counseling literatures include studies of the three components of Barrett-Lennard's (1981) model of empathy. Findings suggest possible individual, professional (medicine versus psychotherapy versus genetic counseling), and cultural (country of origin) differences in the extent to which practitioners remain engaged or detached in their empathic understanding, and the frequency, focus, and skillfulness of their expression of empathic understanding. There is also evidence of variability in how patients and clients perceive empathy communications. Given the strong evidence of positive clinical outcomes when clients experience therapists as empathic (Ahn & Wampold, 2001; Kenny, 1995; Lambert & Barley, 2001) and theoretical and research supporting its importance in genetic counseling (e.g., Duric et al., 2003; Kessler, 1999; McCarthy Veach et al., 2007), understanding how empathy skills can be enhanced and used in clinical work is important.

Significance of the Present Study

As genetic counselors are often faced with situations that require tremendous sensitivity, their ability to understand others and maintain a non-judgmental stance through the use of empathy is viewed as extremely important in this profession (Kessler, 1999; McCarthy Veach et al., 2003). Given the relatively recent development of the profession, little is known regarding how genetic counselors develop professional empathy and whether their empathy is consistent with the model proposed by Barrett-Lennard (1981). Therefore, investigations exploring how genetic counselors develop empathy ability and skills, and what they perceive as most helpful in developing empathy are warranted.

Understanding effective empathy training methods particular to the genetic counseling field is necessary to maximize empathy in patient care and to yield its demonstrated positive benefits (e.g., Duric et al., 2003; Kao et al. 2010; McCarthy Veach et al., 1999). Accordingly, the present study was designed to further understand empathy training in genetic counseling. This investigator interviewed genetic counselors and genetic counseling supervisors to elucidate their thoughts on empathy development. Specifically, the purposes of this qualitative study were to begin to empirically: (1) determine how genetic counselors define their professional use of empathy; (2) clarify which training methods are used to build empathy skills and which are perceived as most effective; (3) determine whether genetic counselors' learning of empathy and genetic counseling supervisors' training of students vis-à-vis empathy incorporate skills congruent with the Barrett-Lennard Model.

Chapter 2: Literature Review

Genetic counseling is a rapidly growing field. Given the relatively recent development of the profession, many aspects of professional preparation are just starting to be examined empirically. In particular, as no research has examined the nature and effectiveness of empathy training in genetic counseling graduate programs, findings from the medical and mental health fields may offer insights into genetic counselors' professional development of empathy. This chapter consists of six major sections: 1) a review of research on empathy as a teachable skill; 2) a review of research describing how empathy is taught in medical training; 3) a review of research concerning how empathy is taught in mental health training; 4) a review of pedagogical methods in genetic counseling that may have implications for empathy development; 5) a discussion of the implications of research from the medical and mental health literatures for empathy development in genetic counseling; and 6) the purpose of the present study.

Can Empathy Be Taught?

Although research demonstrates health care providers possess empathy skills, there is limited empirical understanding of where/how they acquire their empathic understanding, empathic expression, and recognition of patient reactions to their empathy. One possibility is that empathy is an innate ability, and individuals self-select into helping fields due to an already enhanced empathic ability. Brothers (1989) argues that empathy is a biological and psychological construct "present at birth and elaborated on by cognitive maturation and by subsequent experiences in the social milieu" (p. 13). In an article entitled "A Biological Perspective on Empathy," Brothers (1989) presents three hypotheses about the acquisition of empathy: 1) the production of similar affective

responses due to automatic mimicking of another's expression that occurs during social communication; 2) classical conditioning, whereby emotional expressions by one person are perceived by an observer, which invokes in the observer emotional associations from previous and similar subjective experiences; and 3) symbiotic processes, including an automatic central nervous system response to another person combined with a cognitive evaluation of the social cues presented by another leading to the subjective response that we call "empathy." Describing a confluence of data across a variety of disciplines, Brothers concludes that empathy is most likely a single phenomenon arising from both cognitive (neuronal) processing and autonomic responses.

Brothers argues for the inherent nature of empathy by describing an oft-cited study of newborns. In that study (Sagi & Hoffman, 1976), newborns were found to respond to the distressful cries of other newborns by mimicking their cry. Brothers further points out the myriad of "syndromes" characterized by defects of interpersonal communication. Autism Spectrum Disorders have received the most attention in this regard, but other conditions also involve difficulties in emotional perception and expression. For instance, patients with right hemisphere lesions report the ability to feel emotion but an inability to express it through verbal or non-verbal means (Ross & Mesulam, 1979). The effects of such neurobiological deficits bolster the notion of empathy as an innate ability and further suggest individuals who are unable to experience and express empathy are not "normal."

While not discounting its biological roots, others argue that defining empathy as sympathetic and parasympathetic responses is too reductionistic; empathy does not involve merely identifying and mimicking another person's affect, but it also involves

subsequent feelings of one's own (Spiro, 1992). These feelings relate to the perceptual part of empathy, or the first component of Barrett-Lennard's (1981) model, in which a person senses another's experience. Some describe this aspect of empathy as a skill that can be learned; for instance children learn it through socialization in their culture, specifically by observing their parents and others (McCarthy Veach et al., 2003). In a similar fashion, the second component of empathy, expression of one's understanding, may be refined through learning activities (Gladstein, 1983).

In accordance with a belief that empathic understanding and expression can be learned, both the medical and mental health professions attempt to teach empathy. For instance, Roh, Hahm, Lee, and Suh (2010) evaluated empathy in Korean medical students. Responding to those who argue that empathy declines in medical school due to the heavy academic load and the emphasis on scientific detachment and objectivity (e.g., Spencer, 2004), Roh et al. noted that if empathy can decline, it also must be able to be promoted. They stated that experiences that oppose detachment and objectivity should correspondingly enhance empathy in medical students. Spiro (1992) described how medical students and physicians can "retain and enhance their natural empathy" through activities such as story-telling and conversations in which experiences and feelings are shared.

Within mental health fields, "microskills" training is a foundational part of beginning counselor coursework. Often these skills include training in primary and advanced empathy. Empathy is a hallmark skill that beginning students in helping settings will be expected to demonstrate (Young, 2005). Fostering empathy skills and abilities is one of the preparatory goals of many counselor training programs. Methods

for promoting empathy have expanded over the past several decades. For example, as early as 1970, counseling psychology students were engaging in mindfulness meditation techniques that resulted in increased empathic ability (Lesh, 1970). Other techniques include lectures, role playing, observation of experienced practitioners, practical (field) experiences, discussion, and supervision (Hill & Lent, 2006).

Similarly, genetic counseling programs attempt to foster empathy in their students. Genetic counselors in training are required to complete coursework in psychosocial content, according to the American Board of Genetic Counseling (ABGC; ABGC Requirements, 2010). This coursework is designed to help genetic counselors develop strong interpersonal skills, emotional intelligence, and to foster self-awareness. As a result, ABGC accredited genetic counseling programs teach prospective genetic counselors how to both impart medical knowledge and to provide psychological counseling (ABGC, 2010). While no studies have examined the effectiveness of this training, Kessler (1999) points out that empathic capability helps genetic counselors empower their patients to make choices, deal with their current life issues, and feel better about themselves.

Summary. It appears that while some aspects of empathy may be innate, at least parts of empathy can be learned/refined. Because an ability to empathically connect with clients and patients is valued so highly, medical, psychological, and genetic counseling curricula include empathy training. The next section outlines and examines the effectiveness of various methods and interventions for fostering empathic skills that have been evaluated in medical and mental health settings. Additionally, pedagogical methods

that may have implications for empathy development are reviewed, as there have been no published studies on empathy training interventions in genetic counseling.

How Is Empathy Taught?

This section contains a critique of select empirical studies of empathy training in medical and mental health settings. Searches were conducted on PubMed, and PsycInfo, first using the phrase “teaching empathy” and then using other search terms that included the phrase “empathy.” From these results, this investigator examined abstracts from 1980 to 2011 to identify studies examining how empathy is taught in medical and mental health training. Further, reference lists of all articles were examined for additional related publications. Articles were eliminated if they: were not published in a peer-reviewed journal (e.g., unpublished dissertations), were review articles, were not directly related to teaching of empathy, and/or did not involve an intervention. Fourteen articles were selected based on their significance, as suggested in the literature, and also because they illustrate the variety of empathy training methods that have been examined for effectiveness.

Teaching empathy in medical settings. Many innovative teaching methods have been used to promote empathy in medical students. Particularly, since Markham (1979) found that seminars and theoretical courses in behavioral science and psychopathology did not lead to increased empathy or promote attitude change in medical or nursing students, clinical faculty have looked to unique teaching methods to enhance empathic abilities. These teaching techniques are discussed below, by method, and include communication skills training, training in humanities, including drama and literature, and experiential learning exercises. They are summarized in Table 1.

Table 1. Studies Reporting Teaching Empathy in Medical Settings*

Source	Design and Participants	Intervention	Barrett-Lennard (1981) Empathy Component(s)	Outcome Measure	Empathy Results
Winefield & Chur-Hansen (2000)	Pre-post comparison of 96 first year medical students	Two 90 minute workshops teaching communication skills	Component 2: Empathic Expression	Written empathic responses to trigger statements	p < .0001; students improved post-intervention
Shapiro, Rucker, & Robitshek (2006)	Pre-post comparison of 26 third and fourth year medical students	Two week elective course for improving self-reflection and increasing empathy	Component 1: Empathic Understanding	Written course evaluations	Student reported fair increase in empathy; compassion towards families was maintained
DasGupta & Charon (2004)	Case study of 11 second year medical students	Six week elective course using reflective writing to enhance empathy	Component 1: Empathic Understanding	Written course evaluations	Students reported that reflections helped them empathize with patients' experiences
Shapiro, Morrison, & Boker (2004)	Cohort-control study of 22 medical students randomized to treatment or control groups	Four month elective course in empathy training using literature in medicine	Component 1: Empathic Understanding	ECRS (validated) and BEES (validated)	Post-intervention BEES p < .01; no difference on ECRS

Dow, Leong, Anderson, & Wenzelm (2007)	Cohort-control study of 20 residents randomized into treatment and control groups	Four ninety-minute empathy workshops using theater curriculum	Component 1: Empathic Understanding Component 2: Empathic Expression	Evaluated medical interviews using a Theater Tool; attended pre-and post-workshops	p <.01; demonstrating improvement on empathic communication, non-verbal communication, relating to the listener, respect for dignity, and overall impression
Deloney & Graham (2003)	Survey of 138 first year medical students	Attended Wit, and received a pre-play lecture on end of life care; participated in post-play discussions	Component 1: Empathic Understanding	Post-play survey, compared to national sample	Self-reported play led to enhanced reflection of physiological discomfort of patients
Wilkes, Milgrom, & Hoffman (2002)	Case study of 9 third year medical students	Simulated experience where students randomized to one of three clinical conditions spent a night in a hospital	Component 1: Empathic Understanding	Post-discharge questionnaires	Students reported a desire to improve patient hospitalizations, noted a shift in attitude toward patients and a desire to be more empathic
Henry-Tillman, Deloney, Savidge, Graham, and Klimberg (2002)	Pre- and post-comparison using 87 first year medical students	Students shadowed a patient and observed empathic communication techniques between the medical staff and the patient; post-shadowing small group discussions	Component 1: Empathic Understanding Component 2: Empathic Expression	Survey of knowledge of empathy techniques and small group discussions were transcribed and analyzed	No significant differences in knowledge of empathy techniques on pre-and post-comparison; small group discussion revealed that students reported developing a sense of empathy for their patient but reported no changes in empathic expressions ability

Note. *Studies are listed as they are presented in the text

In Winefield and Chur-Hansen's (2000) study, first year medical students participated in two, 90 minute empathy training workshops focused on teaching communication skills. Workshops included lectures, viewing videotapes, and role playing with standardized patients. One hundred seven students participated in these trainings as part of a "Doctor, Patient, and Society" course. Prior to participation and again upon completion of the workshops, 96 students wrote empathic responses to 10 trigger statements and completed two tape-recorded interviews (a "practice interview" and a "real interview") with a community member whose presenting concern was related to psychological adjustment and/or well-being. Trained raters coded responses to the trigger statements using a 5-point system: aggressive (0), non-empathic (1), partially acceptable (2), interchangeable/empathic (3), and facilitative (4). Using a repeated-measures ANOVA, they found students improved significantly on the written empathy test post-intervention ($p < .0001$), and women scored significantly higher than men ($p < .05$). The researchers concluded that students experienced a significant increase in empathy as a result of participating in communication skills training activities. Following the second interview, the medical students reflected on three successful interchanges with the patient and three interchanges that could have been handled better. Specific findings from the interviews were not reported.

While the authors reported an increase in empathy, it appears their outcome measure primarily demonstrated that students improved in *expressed* empathy ability [Barrett-Lennard's (1981) second component], as measured by responses to hypothetical patient statements. Despite the positive findings, there are several methodological concerns. First, there is no control group. While empathy may have improved due to

workshop activities, other events (e.g., participation in general medical training) may also have led to increased empathy. Second, while written responses improved, the researchers did not report results from the two interviews indicating whether there were changes in the students' empathy from the first to second interview. Therefore, it is unknown whether improvement in expressed empathy to written responses translated into actual practice. Further, as students completed these exercises for a graded course, they may have had a different motivation for improving empathy beyond the desire to improve their clinical skills. Finally, as students participated in an array of activities, it is difficult to ascertain which activity may have facilitated the improvements in empathic expression, making it difficult to decipher where to concentrate further training efforts.

Shapiro, Rucker, and Robitshek (2006) evaluated a medical student elective course designed to facilitate humanistic aspects of becoming a physician. Activities included learning from role models and peers, reading about student and physician experiences, self-observation and observing others, self-reflective exercises, and training in problem-solving. Course goals included increasing altruism, empathy, and compassion toward patients. The course was offered to students in their third and fourth years of training, and 26 students completed the elective. Student evaluations and class discussions were used to measure course effectiveness. Their quantitative results were based on 11 anonymous course evaluations. Based on a 5-point Likert scale, the results of the evaluations showed that students found the teachings and readings in the course to be excellent. While students reported only a fair amount of success in increasing empathy for their patients ($M = 4.1$), they indicated that their level of compassion towards patients and families was maintained over the duration of the course ($M = 4.6$).

The humanistic aspects of this course appear to be geared toward improving physicians' empathic understanding by tapping into their self-reflective abilities and personal attitudes and beliefs. The authors noted modest success in using these methods to increase empathy. However, some aspects of their study suggest caution when interpreting findings. While the number of students participating in the course was impressive, only 42% completed evaluations. This low response rate may not provide an accurate representation of student experiences in the course. Further, the course used multiple methods for increasing self-reflection, improving empathy, and modifying behaviors that decrease patient care and personal well-being. Similar to the Winefield and Chur-Hanson (2000) study mentioned above, individual methods were not evaluated for their effectiveness on each of the goals, making it difficult to ascertain which activities most influenced empathy improvement. Also, similar to Winefield and Chur-Hanson (2000), course instructors were the researchers, which can heighten "demand characteristics" such that students responded to the researchers' implicit goals of the course and changed their behavior accordingly. Finally, as the course was an elective, students self-selected to participate and frequently commented to the instructors that the course was "preaching to the choir."

Other researchers have attempted to promote humanistic attitudes in medicine by incorporating the arts to enhance empathy. For example, DasGupta and Charon (2004) used reflective writing, an "established method for teaching medical students empathic interactions with patients" (p. 341), in an elective narrative writing class for 16 second year medical students in spring semester 2002 and 2003. Students initially wrote essays about a personal illness or the illness of a close friend or family member. Over the six-

week course, they re-wrote the essay from different perspectives (i.e., patients, family members, physicians) and used different writing styles (i.e., prose, essay). Eleven students completed course evaluations concerning the narrative writing experience and their responses comprise the outcome data. Two raters independently analyzed those evaluations for themes. Results showed that students felt the narratives allowed them to better understand and connect with the affective components of illness. Further, they believed reflecting on their experiences helped them empathize with patients' experiences.

This study demonstrates the utility of writing assignments as one way to help students tap into their own experiences, thus deepening their empathic *understanding* of patients' experiences [the first component of Barrett-Lennard's (1981) three component model]. However, the results are tenuous, given the low number of self-selected participants and the lack of any statistical or design control in their study. Of primary concern, DasGupta and Charon's (2004) empathy measure has not been validated, nor was it administered prior to entry into the course as a baseline measure. Therefore, any change in empathy was based solely on self-report, and it is unknown whether self-reported increases in empathy actually translate to practice. Further, it is unknown whether other aspects of the medical curriculum, which were experienced simultaneously, might have led to the increased empathic understanding reported by students. Therefore, it is difficult to ascertain whether writing about personal illness experiences enhances empathic understanding in the physician-patient relationship.

Shapiro, Morrison, and Boker (2004) used literature as a method for empathy training. They developed an eight-week (one hour/per-week), elective course for medical

students comprised of readings and discussions based on patient-physician relations. Twenty-two first year medical students were randomly assigned to either the immediate intervention group or the wait-list control group. All students completed pre- and post-intervention testing on the following dependent variables: the Empathy Construct Rating Scale (ECRS; LaMonica, 1996), the Balanced Emotional Empathy Scale (BEES; Mehrabian, 1996), and a measure developed by the researchers to assess attitudes toward the humanities and how the humanities can help medical students in their profession. Additionally, they participated in pre- and post- group interviews where questions centered on empathy and literature as a tool for empathy development. The ECRS asks respondents to assess their ability to listen carefully, paraphrase, and check to see if they accurately understand another's experience. The BEES test asks respondents to rate their ability to feel others' suffering or to take pleasure in the happiness of others. Those in the wait list group completed the pre-intervention testing twice, once at the time of enrollment, and once four months later when the intervention commenced. No significant differences were found in responses to the empathy measures for the wait list group between enrollment and the beginning of the course. Students also participated in focus group discussions at the time of enrollment and upon completion of the intervention. Discussions inquired about defining empathy, how humanities can improve understanding of a patient's perspective, how the humanities can make one a better physician, and how the humanities can help medical students cope with the demands of medical school.

All 22 students completed the first focus group and initial quantitative evaluations. Ten of the 11 students in the intervention group completed every post-

intervention measure and participated in the follow-up focus group. Nine of 11 students in the wait-list group participated in the follow-up focus group, while only 6 completed the post-intervention measurements. Because of small sample size, immediate intervention and wait list groups were combined for the purpose of analysis and no comparisons were made between groups. Results showed no differences in pre- and post-intervention scores on the ECRS. However, on the BEES and attitude scale, significant differences ($p < .01$) were found after the elective course, suggesting improvement in empathic understanding and perspective-taking, and in attitudes toward the humanities as a useful tool in professional development. Interestingly, responses to the two empathy measures (ECRS and BEES) were not significantly correlated ($r = .14$); the researchers suggested this was because they measure different dimensions of empathy, namely cognitive/behavioral aspects of empathy versus emotional aspects of empathy, respectively. The researchers suggested that a course involving the humanities improves the emotional aspects of empathic *understanding* but does not necessarily promote the cognitive/behavioral features of empathic *expression*. Qualitative results from the pre- and post- group interviews revealed no changes in definitions of empathy from pre- and post- intervention; however, after the intervention students gave more descriptive responses when taking the perspectives of others and gave more detail when describing the role of the humanities in medical training.

Similar to other investigations on teaching empathy, this study focused on the effects of humanities training in helping students develop a deeper understanding of their patients' experiences, or the first component of the Barrett-Lennard (1981) model, rather than empathic expression or reception. Strengths of this study include randomized

assignment to groups and the use of a control group. However, because of their low response rate for evaluations, the groups were collapsed for analysis. The results showed that affective components of empathy were improved by engaging in reading and discussing literature related to medicine, while the cognitive-behavioral aspects of empathy remained unchanged. As other studies have shown, an inability to express empathy to the patient can leave a patient feeling misunderstood (cf. Lin et al, 2008). This elective course, therefore, may require some tweaking to help students develop skills, not only in experiencing empathic understanding, but also in expressing their empathic understanding. Similar to Shapiro et al. (2006), this study was an elective course. Therefore, those who enrolled may have already had an awareness of the critical role of empathy in medical practice, and may have been more apt to utilize empathy skills or have higher baseline levels of empathy than students who chose not to participate in the course.

Research has also investigated the role that acting and drama can play in empathy development. Recently, Dow, Leong, Anderson, and Wenzel (2007), sought to discover if medical residents could learn empathy from four theater professors, using actor training techniques. Twenty residents rotating in an ambulatory continuity care clinic were enrolled in a month long study consisting of four, 90-minute empathy workshops. Workshops consisted of learning about active listening and clinical empathy, verbal and non-verbal empathy skills, breathing, and timing. Residents' empathic communication was evaluated before and after the workshops by one of the theater professors with either a new, follow-up, or urgent encounter with an actual patient. They measured empathy using a modified scoring tool that is routinely used in the theater department to measure

student performance. The tool is comprised of the following subscales: empathic communication, verbal communication, non-verbal communication, relating to the listener, respect for dignity, and overall impression. A no-treatment control group, comprised of six other residents completing the same rotation, participated in two observed patient encounters. Baseline two sample t-tests showed control and intervention groups were initially similar across all six subscales of the measure. Mixed effects ANCOVA showed that, compared to controls, the intervention group significantly improved on all subscales except verbal communication ($p < .01$) after completing the workshops.

This interesting intervention focused on aspects of empathy related both to understanding, using active listening and relating tactics, and to empathic expression, comprised of verbal and non-verbal skills [Barrett-Lennard (1981) Components 1 and 2]. Strengths of the study include that empathy was assessed by instructors, rather than by self-report, and measured in vivo while students were working with actual patients. The results suggest residents were particularly successful in improving their empathic understanding and non-verbal expressive skills. The findings would have been more robust if the residents were randomized to treatment or control groups, and if the groups were larger. Further, when the residents were evaluated, they could have seen a patient for the same purpose (i.e., either a new, follow-up, or urgent appointment) rather than by happenstance, which would have controlled for the effects of this variable. The nature of these different types of appointments may have affected the results; for example, residents may have had less time to communicate with patients presenting with urgent needs, and those with patients who were returning may have been able to demonstrate

more empathic expression due to already-established rapport. Obtaining the patient perspective on these visits would have provided an additional and beneficial perspective to the study, assessing how patients experienced the residents' empathy and comparing their perceptions to the professors' evaluations. Additionally, as students were rated by their instructors in the post-intervention interview, demand characteristics may have altered their interactions with their patients in that observation.

Also using drama as a method for teaching medical students' empathy, Deloney and Graham (2003) had 138 first year medical students attend the play, *Wit*, depicting a woman diagnosed with Stage 4 ovarian cancer and who is undergoing experimental treatment. Students received a pre-play lecture on end of life care and participated in post-play discussions with the cast and clinical preceptors. They also completed a survey assessing the effects of the experience after the production, and their responses were compared to those of a national sample of the general public. Students also were asked to reflect on the play in an email dialogue with the course instructors. Results suggested that most students enjoyed the performance (91%), they felt the portrayal of patient emotions was "entirely real" or "very real" (92%), and they were emotionally moved "a great deal" or "pretty much" (77%). Finally, students found the portrayal of doctor-patient communication to be somewhat real (67%). Using a 5-point Likert scale, students reported the degree to which the performance made them reflect on patients' physical pain and emotional suffering. They reported more reflection on physiological discomfort ($M = 4.48$) than on emotional discomfort ($M = 4.35$). Based on student writings, the authors deduced that some students perceived medical education as suppressing their empathic understanding. Conversely, the theater production and post-play discussion

were helpful tools to get students in touch with their feelings and provided a forum for reflection on these feelings.

Strengths of this study include a relatively large sample, a high participation rate, and student enthusiasm about this form of training. The play, *Wit*, gave students the opportunity to observe and reflect upon doctor-patient relationships and patient experience, and to reflect on their own role as a clinician. These trainings would presumably more directly influence empathic understanding than empathic expression or patient perception of empathy. While the authors' claim the drama led to attitude change, because pre-play surveys were not administered, it is difficult to determine the validity of this statement. However, observing a play appeared to cause students to reflect upon patient experiences, particularly related to physical pain. This finding is congruent with those of a previously reviewed study of physicians who reported more concern with physiological distress than with psychological components of illness (Lin et al., 2008). Though students may have reported a fair increase in their empathic understanding of a woman with Stage 4 ovarian cancer, this may not generalize to all patients, and their ratings may relate more to compassion or sympathy. Therefore, future research should examine whether observation of a play translates into increased empathy in multiple clinical presentations.

Simulation is another method used to train medical students in empathy. Wilkes, Milgrom, and Hoffman (2002) examined whether empathy would be increased when medical students participated in a simulated inpatient hospitalization experience. In their study, nine third year medical students spent the night in a hospital, presenting with either back pain following a motor vehicle accident, dehydration in an HIV-positive patient, or

loss of consciousness following a fall from a ladder. For eight of the nine “patients,” the medical team was “blind” to their student-status, believing it was a true admission. One attending physician, not wanting to deceive the medical staff, informed them of the simulation. As this student reported a very different experience, his evaluations were not included in the results. Using post-discharge questionnaires, researchers determined that students felt the physicians were interested in their physical ailments and disregarded their psychological needs while in the hospital. Conversely, the students reported the nursing staff was attentive and caring. Following their stay, students reported “concern with improving the human aspects of the patient experience” (p. 531) and noted that more communication with patients would be pivotal in improving the patient experience. The students acknowledged a shift in their attitudes following the experience and they reported they would interact more empathically with patients in the hospital as a result of the simulation. The researchers concluded students gained a heightened sensitivity and better understanding of the patient’s perspective [consistent with Barrett-Lennard’s (1981) Component 1].

This study has several limitations. First, students who participated in the study had not yet begun clinical rotations, which have been identified by some as leading to a decline in medical students’ empathy (Spencer, 2004). Replicating this experience with advanced medical students and with practicing physicians would help to determine the “strength” of the intervention for improving physician empathy. Further, while students reported changes in attitude, these were not measured using pre- and post-study evaluations. Having the students complete pre-study questionnaires would have provided a more robust measure of the changes in attitude the researchers claim to have obtained.

Finally, in an attempt to teach empathy to medical students in a less *analogue* manner, Henry-Tillman, Deloney, Savidge, Graham, and Klimberg (2002) asked first year medical students to shadow new patients during an oncology visit. Their goal was to give students the chance to experience health care from a “patient perspective” and to observe doctor-patient communication. Eighty-seven students completed their visits, while 59 students were unable to participate in the intervention due to scheduling difficulties and patient no-shows. Participants completed pre- and post-shadowing surveys to measure their knowledge of empathic communication techniques. Additionally, they engaged in small group discussions relating their experiences to empathy one week after finishing their visit. These discussions were recorded and analyzed. Survey results showed no significant change in knowledge of empathy techniques after shadowing the patient. However, in small group discussions, students reported developing a sense of empathy for the patient that they shadowed.

From this study, it appears shadowing patients produced mixed results vis-à-vis increasing empathy. While 70% of the students reported feeling empathy for their patient, little changes were found on the measure of skill and knowledge of empathic communication techniques. Further, the researchers suggested that feeling empathy for a patient is equivalent to learning about empathy. As discussed above, empathy is a complex process that is difficult to define and requires skills in listening and communicating. While shadowing patients provides students with opportunities to gain a patient perspective [Component 1 of the Barrett-Lennard (1981) model], as their results suggest, it does not necessarily enhance empathy expression (and probably does not enhance patient reception). Therefore, results may be enhanced when students are

educated about both affective and cognitive aspects of empathy and taught skills to verbally express their empathic understanding.

Summary. The results of these studies show that most empathy training in medical settings has focused on fostering empathic understanding (e.g., DasGupta & Charon, 2004; Dow et al., 2007; Shapiro et al., 2006). Of particular note, a major emphasis of empathy training appears to be modifying students' attitudes about the importance of empathy, not only for physiological aspects of patients' medical conditions, but also for psychosocial aspects (e.g., Henry-Tillman et al., 2002; Wilkes et al., 2002). Clearly, an anti-empathy attitude would inhibit empathic understanding and expression.

Some instructional methods address the communication aspects of empathy and attempt to hone these types of skills (Winefield & Chur-Hansen, 2000). No studies examined herein focused on patients' perceptions or receipt of empathy. Only a handful of studies have used control groups (e.g., Dow et al., 2007; Shapiro et al., 2004), and many used multiple pedagogical methods (e.g., DasGupta & Charon, 2004, Shapiro et al., 2006; Winefield & Chur-Hansen, 2000), making it difficult to target the most effective parts of their interventions. Further, many studies have used non-validated empathy measures, including self-reported improvement in empathy skills, leading to questions about the validity of their findings, and making comparisons across studies difficult (Deloney & Graham, 2003; Wilkes et al., 2002).

Generalization of findings is limited by samples that often are self-selected (e.g., taking elective courses) and small, and there may be demand characteristics (e.g., researchers are also the instructors) (e.g., DasGupta & Charon, 2004; Shapiro et al.,

2006). Additionally, classroom activities that are graded may stimulate different motivations than non-credit, non-graded trainings (e.g. Shapiro et al., 2004; Shapiro et al., 2006). Despite these limitations, many studies demonstrate positive outcomes, suggesting that empathy can be increased through a variety of pedagogical techniques, including communication training (Winefield & Chur-Hansen, 2000), using the arts and humanistic training (Deloney & Graham, 2003), and through experiential techniques, such as simulations and patient observation (e.g. Henry-Tillman et al., 2002; Wilkes et al., 2002).

Teaching empathy in mental health settings. Research on training empathy in psychotherapy has a long history. The bulk of this research occurred in the 1970s after Carl Rogers (1957) contended that empathy contributed significantly to change in therapy. While Rogers (1980) advocated that empathy skills be developed through cognitive and experiential training under supervision, others viewed empathy as concrete, observable skills that could be applied systematically (Ivey & Authier, 1978). In particular, Truax and Carkhuff (1967) are credited with affecting a paradigm shift in counselor training leading to a focus on these discrete “microskills.” Where counselor training had previously focused on conceptual skills and content areas, Truax and Carkhuff’s model focused on training counselors in counselor behaviors that were proposed by Carl Rogers to be effective in therapy: warmth, genuineness, and empathy. Interestingly, Carl Rogers (1975) did not believe that empathy could be boiled down to microskill use. He believed microskill training was simplistic in its attempt to foster empathy in client-counselor relationships. Rather, Rogers championed empathy as a process used to enhance the client-counselor relationship. Despite his assertions,

microskills training became a predominant educational paradigm, one that exists to the present day.

Microskills Training. From this ideology, skills-based instruction in these counselor behaviors, or “microskills training,” was developed to “reduce therapeutic complexity...by focusing on single skills and allowing students to practice and master them individually” (Ridley, Kelly, & Mollen, 2011, p. 803). Specifically, microskills involve nonverbal skills (McCarthy Veach, Bartels, & LeRoy, 2001), such as attending to verbal and nonverbal messages from the client and include the therapist’s use of nonverbal (physical) behaviors to communicate understanding. Microskill use also involves communicating understanding through the reflection of content and feeling of a client (e.g., primary empathy), as well as reflecting the underlying *implicit* meaning and the therapist’s interpretation of the client’s experience (e.g., advanced empathy) (McCarthy Veach et al., 2001; Van Velsor, 2004).

Since the 1970s, when Allen Ivey created the first microskills book, this approach quickly became the dominant method in counselor training programs and has retained its prominence for four decades. As Milville, Redway, and Hernandez (2011) point out, several microskills training books are into their sixth edition and are used widely to promote skills acquisition in burgeoning counselors. Ivey (1994) noted that these skills serve as the foundation for effective counseling and help counselors act purposefully with their clients. Further, they promote empathy by fostering understanding through perspective taking and communicating that understanding to the client (McCarthy Veach et al., 2001).

Not only has training in microskills been prolific, research in this area dominated

the counseling and psychotherapy literature between the 1970s and early 1990s. Ivey and Ivey (2009) reported that there have been more than 450 studies validating the efficacy of microskills in therapy. However, some evidence suggests that this training fails to increase empathic ability in graduate students (Bath & Calhoun, 1977). Hill and Lent (2006) pointed out that research on helping skills has come to a “virtual standstill” (p. 154), yet therapy programs continue to use training methods based on findings from several decades ago.

Recently, Ridley and colleagues (2011) called for a paradigm shift in training counselors. They noted that the research on microskill training is riddled with design flaws, which may have inflated its efficacy and utility. According to Ridley et al. (2011), many of these studies lack external validity, use poorly defined dependent variables, have small sample sizes, lack control groups, and do not collect pretreatment data to allow for posttest change. Additionally, Ridley et al. (2011) report a paucity of research demonstrating that microskill use leads to therapeutic change. They concluded that while microskills have a place in counselor training, that approach is not comprehensive enough to train truly competent therapists.

Consistent with Ridley et al.’s (2011) assertions, Milville et al. (2011) similarly argue that microskills training lacks the ability to promote skill development in broader counseling competencies, and it does not systematically integrate counselor behaviors with theory, cognition, and affective responses, which capture the range of the counselor experience in session. Based on these sorts of arguments, it appears the counseling field is coming full circle to Rogers’ (1975) assertion that microskills training is insufficient and that training which promotes counselor development (including empathy

development) goes beyond these discrete behavioral units.

Beyond Microskills Training. Educators in the mental health field have used various methods to foster empathy in trainees. In this section, four studies that demonstrate the results of empathy training as part of coursework in mental health training programs are reviewed. An additional study uses an inventive “game” to teach empathy to graduate students. These studies were selected because they measure an applied intervention for teaching empathy and were published in the past three decades (1980-2010). They are summarized in Table 2.

Table 2. Studies Reporting Teaching Empathy in Mental Health Settings*

Source	Design and Participants	Intervention	Barrett-Lennard (1981) Empathy Component(s)	Outcome Measure	Empathy Results
Nerdrum (1997)	Cohort-control comparison of 78 second year social work students	11 week communication skills training program	Component 2: Empathic Expression	Written empathic responses to client statements post-intervention and on follow up 18 months later	Treatment group improved (p = .001); post-test differences between groups were significant (p = .002); follow-up showed significant improvement in both groups but treatment group was superior (p = .002)
Gantt, Billingsly, & Giordano (1980)	Pre-post comparison of 43 students completing a clinical interviewing course	Ten week course on empathic sensitivity and follow up 9-18 months later	Component 1: Empathic Understanding	RAE (validated)	Course improved empathy (p < .001); on long-term follow up, empathy continued to improve (p = .05)
Fernald (1995)	Survey of 48 psychology students completing an externship	Five week elective course on empathy training and completing an empathy assignment	Component 1: Empathic Understanding	Written course evaluations	Self-reported improvement in listening skills

McCollum & Gehart (2010)	Case study of 13 MFT graduate students completing practicum class	Class emphasizing mindfulness and meditation with required journaling	Component 1: Empathic Understanding	Thematic analysis of journal entries	Students reported being more present with clients, more compassionate with themselves and with clients
Barak (1990)	Pre-post comparison of 9 psychology graduate students	Participation in an Empathy game and coursework on empathy; role play exercises	Component 1: Empathic Understanding and Component 2: Empathic Expression	CQR (validated); pre-post role play interviews using Empathy Rating Scale; Empathy game score	CQR improved in response to the Empathy Game ($p < .001$); Empathy rating scale improved ($p < .01$); students improved as they progressed through the Empathy Game ($p < .001$)

Note. *Studies are listed as they are presented in the text

Similar to medical training, empathy is often embedded in mental health coursework. Nerdrum (1997) conducted a study to determine whether empathic communication increased after participation in an 11 week communications skills training program. Thirty-nine second-year social work graduate students participated in the training program, and 39 second-year social work students from two other local programs comprised a control group. Pre-tests revealed no significant between-group differences in personality, but the control group was slightly older and more experienced. To measure change in empathic communication [Barrett-Lennard's (1981) Component 2], students completed a baseline empathic communication task. They watched video-taped segments of clients and were asked to give written responses to 10 client statements. Their responses were rated by both a blinded psychologist and a social worker, using Carkhuff's five point scale for empathic understanding (Carkhuff, 1969). There were no significant between-group differences at the pre-test.

Students in the control group completed 11 weeks of standard curriculum and repeated the same test, while those in the training program participated in daily lectures, role plays, and other experiential learning activities designed to increase empathic communication skills. Both groups completed the same task at post-test and on follow-up, 18 months later. Students in the empathy training program improved significantly ($p = .001$) from pre- to post-test, while the control group remained the same. Post-test differences between the two groups were statistically significant ($p = .002$). At follow-up, both groups had improved their empathic communication skills significantly (treatment group $p = .008$; control group $p = .001$), but the treatment group's empathic communication skills remained superior ($p = .002$). Nerdrum (1997) found that students'

responses over time included less advice-giving and more expression of clients' feelings and perspective. Surprisingly, Nerdrum found that pre-test empathy scores did not predict performance on the post-test; only group participation (i.e., treatment versus control) predicted empathic communication skills at post-test and follow up.

This study used a quasi-experimental design to demonstrate change in empathic communication abilities following empathy training. Despite some attrition from both groups, the results point to lasting effects after participation in empathic communication skills training. Similar to findings in the medical literature, while these results suggest that empathic expression can be taught, the extent to which written responses to hypothetical clients translate to actual clinical work has yet to be determined. Further, written responses are limited to verbal behaviors; nonverbal behaviors cannot be assessed, yet these may be even more influential on how empathic expression is received. Moreover, as pointed out by Hill and Lent (2006), measuring empathy using this type of method (viewing a client statement then writing a reply) measures ability to produce cued responses in a prescribed manner, rather than testing empathic expression in the spontaneous nature reminiscent of actual counseling situations.

Gantt, Billingsly, and Giordano (1980) studied whether coursework would enhance empathic sensitivity in paraprofessionals. Participants included students enrolled in a mental health/human services delivery program at a junior college who completed a 10-week clinical interviewing class. Four courses were taught over two years (2 groups/year). In the first year, 26 students participated, and 17 completed a post-test only measure of empathic sensitivity - the Recognition Assessment Empathy measure (RAE; Administrator's Manual, 1975). The RAE asks respondents to choose the most

empathic statement from four possible choices in response to 20 client statements. Eleven students were re-tested at a nine month follow-up. The following year, 25 students were pre-tested using the RAE, nineteen completed the post-test, and 11 participated in a follow-up 15 to 18 months later.

The clinical interviewing courses were the same, comprised of didactic and experiential components (i.e., lectures, modeling, and role playing, aimed at developing skills in listening, empathy, questioning, and decision-making). Results showed students who completed pre- and post-test measures improved significantly ($p < .001$). Because there were no significant post-test differences between students who were pre-tested and those who were not, groups were collapsed to analyze differences between post-test and follow-up. Gantt et al. (1980) found that not only was empathic sensitivity maintained over time, but students also showed improvement on the RAE ($p = .05$). Comparison of the paraprofessional students' pre-test scores with normed data from undergraduate students revealed no significant differences. At follow-up, their scores were similar to the norms of experienced clinicians.

This study demonstrates that training can improve empathic sensitivity [Barrett-Lennard's (1981) Component 1]. The use of a repeated measures design to determine the effects of empathic training over time is a strength of this study. However, the researchers failed to account for several methodological issues. One issue concerns the effect of instructor. Since the groups were collapsed for analysis, possible differences due to who taught the course were not assessed. Further, students completing the course in the first year were post-tested months after the course was completed and followed up nine months later. Conversely, in the second year, it is unknown when students completed the

post-test, but follow up was 15 to 18 months later. Despite these differences, the groups were analyzed as if they were equivalent. Further, while the RAE has demonstrated validity and reliability, it does not measure empathy in an actual helping relationship, nor whether a person can formulate an empathic response. Rather, it assesses whether a person can recognize the most empathic response. Although students may be better able to distinguish empathy as a result of training, it does not mean that they are able to generate their own empathic responses in a therapeutic setting.

Using another course-based method, Fernald (1995) attempted to improve empathic listening skills among senior undergraduate students studying psychology. Forty-eight students participated in weekly, three-hour seminars as part of their externships in community mental health clinics, hospitals, and residential treatment facilities. The first four weeks of the seminar focused on empathic learning activities, including reading works by Carl Rogers, class discussions on empathic listening, observing others and role playing with classmates, and watching video-tapes of others and themselves practicing empathic listening. Students were then asked to: audio-tape a session of themselves practicing empathic listening with another person not in the course, transcribe the audiotape, and write an evaluation of the session as part of an Empathic Listening Assignment (ELA). During week five they completed questionnaires (Scale: 1 = Poor, to 7 = Excellent) evaluating, for instance, how well the course learning activities prepared them for completing the ELA, and the educational value of the ELA.

Students from three seminar groups (Group 1: $n = 15$, Group: 2 $n = 19$, Group: 3 $n = 14$) completed the course. Analyses of variance revealed no significant differences among groups in their responses to this questionnaire, so their data were combined.

Results revealed high mean ratings for items such as: “The ELA helped me improve my listening skills” ($M = 5.94$, $SD = 1.15$), and “My empathic listening skills improved significantly over the first five weeks of this semester” ($M = 6.20$; $SD = .91$). Fernald concluded the students’ empathic listening skills were improved through the course, and the ELA was an effective instructional method for teaching empathic listening.

This study describes the use of a course in training for empathic listening. However, there are major methodological concerns. Primarily, self-report may not reflect actual skills. The evaluation form used to assess student evaluations of a course assignment had no established validity. Additionally, no definition of “empathic listening” was provided by the author, and it is unknown what definition (if any) was provided to students. Given that they evaluated their empathic listening skill-level, it would be important to have students use a consistent definition of this construct. Further, students who complete a course for credit may have motives, beyond altruism and humanitarianism, for reporting improvement in their skills. Another consideration is that although the author described the course as stemming from Person-Centered ideology, it appears empathic listening was framed around microskills of reflecting content and feelings, which is in direct opposition to what Carl Rogers (1975) intended by empathic understanding. Also, reflective listening in this study appears to refer to one’s ability of restatement, rather than the ability to experience a client’s world from their perspective. Finally, the author “missed” an opportunity to analyze behavioral data, that is, the audio recorded sessions and the students’ self-reflections on their empathy during those sessions.

“Mindfulness” constitutes another method for teaching empathy. McCollum and

Gehart (2010) used mindfulness methods to teach marriage and family therapists (MFTs) “therapeutic presence,” which they defined as being “readily perceptible to others by the quality of listening, attitude of receptivity, and open style of engagement” (p. 348). Therapeutic presence, in this way, may be a precursor to, or overlap with, empathic understanding, and it relates to *nurturant empathy*, as identified by Bachelor (1988). The researchers integrated mindfulness teaching into their two practicum courses (one course taught by each author). They used assigned readings, in-class exercises, journaling about learning mindfulness and its impact on one’s personal life and clinical practice, and daily (5-10 minutes) mindfulness practice. Of the nineteen students who participated in the courses, 13 submitted journals as data for the study. Thematic analysis revealed the students experienced being more present with clients, felt positive effects of meditation such as increased calmness and decreased inner chatter, experienced more balance in therapy between “being” and “doing,” and they were more compassionate and accepting of themselves and their clients.

This study employed meditation and mindfulness to center therapists and increase their ability to foster a healing presence in therapy. The results suggest, per self-report, that students experienced positive effects, both personally and with respect to their clinical work. However, their findings must be interpreted with caution. Of the 19 students, only 13 allowed their personal journal entries to be analyzed, leading to questions of self-selection. Further, as mentioned in previous studies, the researchers were also the course instructors, leading to questions about demand characteristics and validity of the reported results. Also, the researchers did not report the number of students per course or any differences based on class participation. Although they attempted to be

uniform in their teachings, it is quite possible course differences may have elicited discrepant outcomes. Despite these concerns, while the researchers did not attempt to measure the presence of empathy in actual therapeutic work, one might infer therapeutic presence would give rise to enhanced empathic understanding. Exploring the clinical implications of this work through validated measures of empathy in therapy would help to authenticate their findings.

This investigator found one study involving an innovative empathy training technique that was not part of required coursework. Barak (1990) invited nine first semester psychology graduate students to participate in an “Empathy Game.” Students completed several lab exercises focused on communication skills related to empathic expression (e.g., attending, reflection, and questioning). Next they independently completed the Counselor Response Questionnaire (CQR; Stokes & Lautenschlager, 1978), which measures empathy skill level by asking students to choose the most empathic and least empathic response (out of three responses) to 16 client statements. They also participated in a video-taped role play interview evaluated by blinded raters using a 7-point Empathy Rating Scale (Ivey, Ivey, & Simek-Downing, 1987). Students were then placed randomly into groups of three to participate in a game. The game consisted of client scenarios requiring groups to try to understand the clients accurately and to reflect that understanding by selecting from multiple-choice options. Group members had to reach a consensus on their answers, which were then awarded scores of 0-4 per question. After participating in the game, students repeated the CQR and completed a second video-taped role play interview. Analysis was conducted using three dependent variables: the game score, the CQR, and the Empathy Rating Scale results

from the video-taped segments. Results showed an increase in the students' performance as they progressed through the Empathy Game ($p < .001$). Their CQR scores improved in response to the Empathy Game ($p < .001$), and the scores on the Empathy Rating Scale showed a significant increase ($p < .01$).

Barak's (1990) intervention used student communication and problem-solving in a game to increase empathic understanding and expression. Of the mental health studies reviewed in this paper, his represents the only investigation in which empathy improvement was measured using simulated therapy experiences [It should be noted, however, that many studies of microskills training have used simulated counseling interactions (cf. McCarthy, Danish, & D'Augelli, 1977)]. Limitations to Barak's study include lack of information about whether the role play used the same confederate client. If the same client was used for both pre- and post-game role plays, her/his behavior may have changed due, for example, to fatigue; or, participants' reactions may have been due to an idiosyncratic client feature (e.g., level of verbal expression). These effects may have influenced participant empathy. Moreover, use of the same client for pre- and post-test role plays may have enhanced post-test empathy due to rapport-building during the pre-test. Additionally, comparison of participants' responses to those of a control group would have helped to establish effectiveness of the intervention. Finally, a larger sample would increase external validity.

Summary. While microskills training has been the dominant means of counselor training, other methods have been used to teach empathy in therapy settings. The studies summarized above reflect the dated nature of most of this research, with a very limited number of recent investigations of empathy training for mental health students. The

paucity of current research is even more alarming, considering the equivocal findings regarding training effectiveness (Hill & Lent, 2006). Further, the studies presented are limited methodologically, representing challenges to measuring empathy and exemplifying conceptual and design flaws that have been pointed out by numerous authors since the 1970s (e.g., Gormally & Hill, 1974; Lambert, DeJulio, and Stein, 1978; Hill & Lent, 2006; Ridley et al., 2011). Some of these challenges include measuring empathy using written responses, multiple choice, or self-report. Only one reviewed study measured empathy in a clinical setting using role plays. Thus, questions remain about the extent to which empathy training translates into actual practice. Additionally, multiple training methods are often employed without specific measurements to discern what is most helpful for teaching empathy.

Despite these limitations, this research suggests mental health students generally improve in response to empathy training methods. These methods historically tend to be longer in duration than the medical interventions, and the researchers were more likely to use validated empathy measures to detect changes. Similar to the medical studies, empathy in a mental health setting has primarily evaluated the first component of Barrett-Lennard's (1981) model, empathic understanding. While some studies have examined empathic expression improvement as a result of training, none have investigated improvement in empathy as a result of training from a patient's perspective. In order to comprehensively demonstrate effective empathy in therapy, mental health professionals should be able to experience empathic understanding, relay their understanding through their responses, and their patients should report receipt of therapeutic empathy. Thus, before research on empathy training in mental health is sidelined, the efficacy of training

methods based on Barrett-Lennard's three components warrants further research.

Teaching empathy in genetic counseling. A blend of microskills training and self-reflective activities is common for teaching empathy in genetic counseling training programs. For example, one widely used genetic counseling basic skills book (McCarthy Veach et al., 2003) makes recommendations for helping students develop basic helping skills. McCarthy Veach et al.'s (2003) manual provides exercises in taking the patient's perspective, role playing with classmates and volunteers, along with examples of effective communication and expression of empathy. These activities may help genetic counseling students understand the decisions their patients must make and the psychological stressors these decisions impose, along with developing skills to express this understanding. Another place where genetic counseling students regularly receive training is through clinical supervision where psychosocial skills may be learned and practiced as part of a clinical rotation. Borders, Eubanks, and Callanan (2006) describe several supervisory methods for developing psychosocial skills, including modeling, role plays, and thinking aloud techniques to help enhance these skills in genetic counselors in training. However, the efficacy of basic skills training and clinical supervision on empathy development in genetic counseling has not been specifically researched. Although research in the area of empathy development in genetic counseling is limited, some findings regarding pedagogical methods in genetic counseling may have implications for empathy development. These studies are summarized in Table 3.

Table 3. Studies with Empathy Teaching Implications in Genetic Counseling Settings*

Source	Design and Participants	Method	Outcome Measure	Results Pertinent to Empathy Development
Hendrickson, McCarthy Veach, & LeRoy (2002)	Separate focus groups of 15 genetic counseling trainees and 11 supervisors	Discussion of live supervision method	Modified Consensual Qualitative Research analysis of focus group transcripts	Strengths of live supervision included enhanced student development, enhanced supervisor development, and relationship building, among others. Live supervision may help trainees develop psychosocial skills.
Lindh, McCarthy Veach, Cikanek, & LeRoy (2003)	Survey of 225 genetic counselors	Examined the nature of clinical supervision for genetic counseling students	Analysis of survey results	Live supervision was the primary means of student evaluation. Provision of one-on-one feedback following a session was a common supervisory activity that may enhance micro and macroskill use
Zahm, McCarthy Veach, & LeRoy (2008)	Interviews of 16 genetic counselors	Qualitative interviews regarding experiences in peer supervision groups	Inductive analysis of interview transcripts	Peer group supervision provides a place for skill development following graduation, which likely refers to both technical and psychosocial skills
Runyon, Zahm, McCarthy Veach, MacFarlane, & LeRoy (2010)	Survey of 185 genetic counselors	Anonymous survey regarding professional development and asked two open ended questions	Interpretative content-analysis of survey findings	Genetic counselors advised students to increase emphasis placed on psychosocial aspects of practice, cultivate empathy in their sessions, and become more psychosocially focused in session

Note. *Studies are listed as they are presented in the text

Hendrickson, McCarthy Veach, and LeRoy (2002) conducted the first published study of genetic counseling supervision by conducting focus groups with 15 genetic counseling trainees and 11 supervisors. The researchers focused on “live supervision” as this is a prevalent mode of genetic counseling student supervision. Live supervision involves a supervisor’s presence in the room during part or all of a genetic counseling session between students and their patients. Hendrickson et al. (2002) found that supervision is comprised of in-session observation, debriefing, anticipatory guidance (i.e., preparation in medical/genetic content and psychosocial aspects of the case), co-counseling, and consultation outside of session. Reported strengths of live supervision included enhanced student development, enhanced supervisor development, relationship building, the provision and receipt of feedback, supervisor gratification in helping students develop (i.e., generativity), and the feeling of a safety net during genetic counseling sessions. Notably, one finding is that live supervision helped trainees develop skills beyond providing genetic information, including psychosocial skill development. Specific methods for this development were not examined, however.

Lindh, McCarthy Veach, Cikanek, and LeRoy (2003) also evaluated genetic counseling supervision by surveying 225 genetic counselors. Their findings suggest that supervisors tended to be relatively new to the field, with 66% having fewer than five years experience, and 55% having supervised 10 or fewer students. Typically, live supervision was the primary means of student evaluation. The provision of one-on-one feedback following a session was a common supervisory activity (47.3%). Similar to the Hendrickson et al. (2002) investigation, this study did not specifically evaluate psychosocial skill development, yet it did yield findings that suggest the possibility of

empathy building as part of the supervisory relationship. In particular, Lindh et al. (2003) noted that feedback immediately following a session can focus on the student's perception of the session and involve corrective comments about technical and microskill use. These researchers also reported that feedback provided several days following a session gives further opportunities to discuss "macroskills" as students reflect on the overall process of the session.

Although clinical supervision in genetic counseling is just beginning to be defined and understood empirically, the two studies reviewed above suggest that it provides a vehicle for student skill development, including empathy. A third study suggests genetic counselors continue to develop empathy skills beyond graduate school. Zahm, McCarthy Veach, and LeRoy (2008) conducted qualitative interviews with sixteen genetic counselors regarding their experiences in peer supervision groups. Peer group supervision is conceptualized as providing a place for professionals to share opinions, discuss current research, and learn how others practice (Bernard & Goodyear, 1998). One of the findings from Zahm et al's study is that peer group supervision provided a place for skill development following graduation. While not explicitly stated, it is likely that skill development refers to both technical skills and psychosocial skills, as case consultation was described as a regular occurrence in peer supervision. Case consultation consisted of discussing both informationally and emotionally challenging cases and patient-provider interactions were examined.

Further substantiating the hypothesis that psychosocial skill development continues "on the job," Runyon, Zahm, McCarthy Veach, MacFarlane, and LeRoy (2010) found that psychosocial aspects of genetic counseling increased in importance for their

185 genetic counselors respondents. Their study consisted of an anonymous survey regarding professional development and asked two open-ended questions, including 1) What do genetic counselors say they have learned about themselves through practicing?, and 2) What advice would they offer novice genetic counselors? In addition to increased emphasis placed on psychosocial aspects, genetic counselors advised students to cultivate empathy in their sessions, to become more comfortable with “throwing the agenda out the window,” and to decrease their provision of information in order to be more psychosocially focused in session.

Finally, a recent issue of the *Journal of Genetic Counseling* includes 35 “defining moments” from genetic counselors practicing around the world. These defining moments include “any personal experiences or events that lead to realization about one’s self as a genetic counselor. Defining moments can come from all areas of one’s life, both personal and professional. They can be positive, negative, or ‘mixed’ events that significantly affect a genetic counselor’s professional development” (McCarthy Veach & LeRoy, 2012; p. 162). The authors of these defining moments describe a variety of significant lessons learned. Notably, these lessons include increased ability to empathize with patients, such as Glessner (2012) and Gordon (2012), who found that their own encounters with cancer enhanced their understanding of their patients’ experiences. Similarly, Chin (2012) reported that her defining moment came when she put herself in her patient’s shoes and realized the importance of giving a patient what he needed, regardless of her genetic counseling agenda. Finally, Mathieson (2012) reported that her defining moment happened when a simulated patient became very angry and Mathieson realized that all patients’ emotional reactions are valid. At that point, she re-defined her

job as a genetic counselor to try to understand and support the patient's experiences, regardless of her own emotional response.

Summary. Research on empathy development in genetic counseling is limited. While none of these studies specifically examined empathy development, they do suggest that genetic counselors learn empathy skills through basic skills training, self-reflective practice, individual and peer supervision, and beyond graduation through their own personal and professional experiences. As empathy is perceived to be such an important component of genetic counseling [cf. Reciprocal-Engagement Model (REM); McCarthy Veach, Bartels, & LeRoy, 2007], examining the efficacy of these training modalities is important. Until then, empathy training methods and research evaluating these methods in medical and mental health settings may be beneficial for informing research on empathy development in genetic counselors.

Implications of Medical and Mental Health Literatures for Genetic Counseling

The medical and mental health studies reviewed in this chapter involve a variety of modalities for teaching empathy, often with demonstrated effectiveness regardless of the technique(s) employed. These results suggest empathy can be taught, and there are multiple ways to do so. One of the most prevalent components of empathy training involved self-reflection, through writing, discussion, and/or course evaluation. Perhaps incorporating reflective exercises into empathy coursework gives students an opportunity to be thoughtful about their training, to comprehend more deeply the concept of empathy, and to recall their reasons for entering into a helping profession. For example, Shapiro et al. (2006) noted that when given the time to reflect, medical students reported "becoming more empathic, compassionate and caring, more self-aware, and better able to learn from

their ongoing clinical experience” (p. 34). Self-reflection was similarly noted to enhance genetic counselor professional development on the job (Runyon et al., 2010; Zahm et al., 2008). Therefore, incorporating opportunities for self-reflection into professional training may foster empathic understanding for genetic counseling patients.

Most of the research reviewed in the medical and mental health literatures focused on developing empathic understanding and empathic expression [Components 1 and 2 of Barrett-Lennard’s (1981) model]. Often perspective-taking techniques were employed to develop empathic understanding, including written assignments and discussions putting students in the role of patient or family member, simulated experiences, patient observation, and meditation. Communication skills were also taught in order to enhance empathic expression and convey empathic understanding. These skills often related to microskills training and included teaching attending skills, reflective listening, and questioning techniques. Similarly, the studies reviewed in genetic counseling training appealed to genetic counselors’ ability to empathically understand a patient and to communicate that understanding through the use of microskills.

While the benefits of empathy training are apparent in these studies, there are a number of limitations with the medical and mental health investigations, including: small samples, participant self-selection, attrition, variability in type, length and intensity of interventions, and differences in how empathy is conceptualized and operationally defined. Some of the medical studies appear to confound attitudes about empathy with empathy ability, and a number rely on participants’ self-reported empathy ability. These methodological and conceptual limitations make it difficult to draw conclusions about how empathy is best taught. Further, while the research offers many ideas about methods

for training in empathy, little information is provided regarding the specific content incorporated into those methods. Future research should include more rigorous designs in order to precisely determine the content and method(s) that are most effective in developing empathy geared toward the unique role of genetic counselors. As genetic counseling students have an already packed curriculum consisting of academic coursework and clinical rotations, this line of research would help determine which aspects of empathy training are optimal for effectively and efficiently preparing students.

Purpose of the Present Study

Genetic counseling practice employs approaches consistent with both medical and mental health services. Genetic counseling includes elements of a teaching model (e.g., provision of biomedical information) and elements of a counseling model (e.g., psychosocial support), with the counselor-patient relationship being central to the process and outcomes (Kessler, 1999; McCarthy Veach et al., 2003, 2007). While one might postulate training in empathy would likewise blend medical and mental health models, empirical data are lacking to demonstrate what training methods help genetic counselors develop and maintain their empathy. The unique aspects of empathy development in the genetic counseling profession warrant investigation. Therefore, the current study sought to investigate how genetic counselors perceive empathy in genetic counseling and how they learn empathy as it pertains to genetic counseling in their training. This investigator interviewed a sample of recently graduated genetic counselors to explore the following questions: 1) What is empathy in genetic counseling? 2) How is genetic counselors' empathy development affected during graduate training? and 3) What do clinical supervisors do to enhance empathy development? This interviewer also interviewed a

sample of genetic counseling supervisors to investigate: 1) What is empathy in genetic counseling? 2) What do supervisors believe they do to foster empathy in their trainees? and 3) How do supervisors assess empathy development in genetic counseling students?

Chapter 3: Methodology

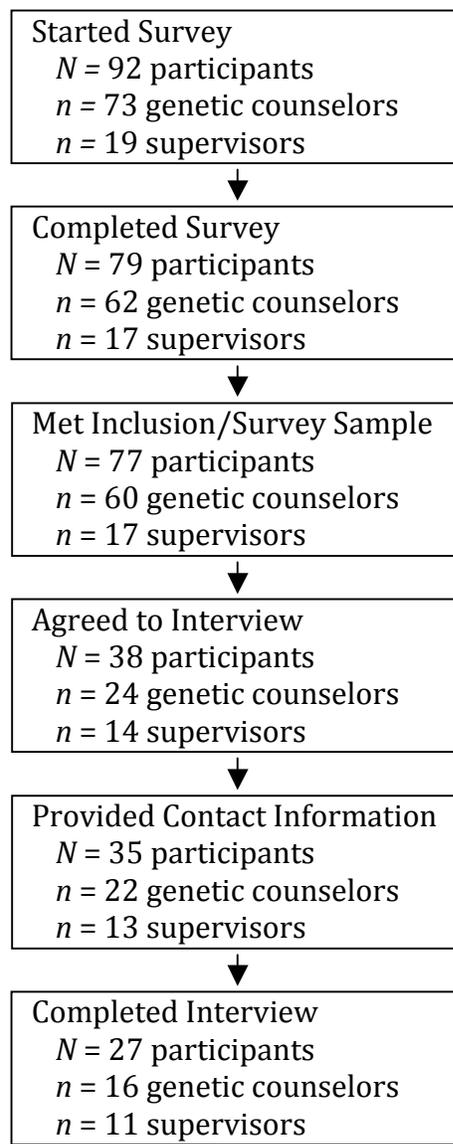
Participant Recruitment

Upon approval from a University of Minnesota institutional review board (see Appendix A), a two-arm recruitment process commenced. First, an email invitation (see Appendix B) was sent on August 18, 2011, to members of the National Society of Genetic Counselors (NSGC) requesting recently graduated genetic counselors to participate in a survey (see Appendix C) and in a follow-up interview (see Appendix D). The eligibility criteria for study participation were graduation within the past four years from an American Board of Genetic Counseling (ABGC)-accredited genetic counselor training program and current occupation as a genetic counselor. The email invitation included a description of the study, informed consent, and a link to the survey, which was available through an online survey tool that allows for respondent anonymity (www.surveymonkey.com). Potential participants were told the purpose of the study was to learn more about empathy development as it occurs in as part of genetic counselor training. Individuals who completed the survey and provided contact information were reached to schedule the telephone interview portion of the study.

For the second arm of the study, program directors of ABGC-accredited programs were contacted via email on August 18, 2011 and asked to nominate two supervisors who they perceived as focusing on empathy development in their supervision (see Appendix E). The email requested that program directors forward an attachment (Appendix F) to the two supervisors. The attachment requested participation in an online survey and in an interview on empathy development in genetic counseling. The attachment contained a description of the study, informed consent, and a link to the survey, which was available

through Survey Monkey (Appendix C). Individuals who completed the survey and provided contact information were contacted to complete the interview portion of the study (see Appendix G). Due to low initial response, a second email was sent to program directors on September 9, 2011. Again, because of low response rates, a third attempt to recruit participants included contacting supervisors directly. A flowchart for recruitment and study participation is shown in Figure 1.

Figure 1. Study Recruitment and Participation Flowchart



Genetic Counselors. Sixty-two genetic counselors (59 females, 3 males) responded to the survey. Of those, two respondents were excluded because they had been graduated for greater than four years, for a total survey sample of 60 participants. Twenty-two individuals provided contact information for a follow up telephone interview; of these, sixteen counselors, all females, completed interviews. The remaining six individuals could not be reached after three attempts to schedule interviews. Demographic data for the survey respondents and for the interview participants are summarized in Tables 4 and 5 and reported in Chapter 4.

Supervisors. Seventeen genetic counseling supervisors, all females, completed the survey. Fifteen responded after the first and second emails, and the remaining two responded after the third recruitment attempt. Thirteen genetic counselor supervisors provided contact information to be reached for a follow up telephone interview. Of these, 11 completed interviews. The remaining two supervisors could not be reached after three attempts to schedule the interview. Demographics for the supervisor survey respondents and the interviewees are summarized in Tables 4 and 5 and reported in Chapter 4.

Instrumentation

This investigator created an online survey and two parallel versions of a semi-structured interview protocol. These instruments were based on extant literature and in consultation with an experienced genetic counselor and two licensed psychologists. The 19-item survey, which was identical for genetic counselors and supervisors (Appendix C), was organized around six general topics: 1) demographic information, including NSGC region of practice, sex, and ethnicity (6 items); 2) professional training information (4 items); 3) genetic counseling experience (5 items); 4) provision of

supervision (2 items); 5) one open-ended item requesting their definition of empathy; and 6) one question requesting contact information for a follow up interview. Survey questions were comprised of either multiple choice or open-ended formats.

The semi-structured interview (see Appendix D) for genetic counselors asked further details about: 1) their definition and use of empathy in genetic counseling; and 2) empathy development and training experiences. The protocol consisted of seven broad interview questions, with accompanying probes concentrating on the themes of defining empathy, empathy utilization, their empathy development, and their clinical training experiences regarding empathy. These questions specifically focused on how empathy is used, particularly in the genetic counseling setting, examples of situations in which genetic counselors felt they used empathy effectively, examples of situations in which empathy was difficult, questions about how their empathy developed was fostered in their genetic counselor training, the role of clinical supervision in their empathy development, and how their experience of empathy in genetic counseling has changed over time.

The semi-structured interview (see Appendix G) for supervisors asked further details about 1) definition and use of empathy; and 2) their methods for providing empathy training and promoting empathy development in supervisees. There were eight broad interview questions, and accompanying probes concentrating on the themes of defining empathy, empathy utilization, methods for helping students develop empathy, and methods for evaluating supervisees' clinical empathy. These questions specifically focused on how genetic counselors use empathy, particularly in the genetic counseling setting, examples of situations in which supervisors observed students using empathy effectively and situations in which students were not empathic in sessions, questions

about how supervisors attempt to foster empathy in students, how they evaluate trainees' empathy, and how they have changed over time and with experience in their fostering of empathy in students.

To test for clarity of content, the survey and semi-structured interview for genetic counselors were piloted on two genetic counselors who had graduated more than four years ago. Similarly, to test for clarity of content, the survey and semi-structured interview for supervisors were piloted on two program directors with supervision experience. Pilot participants were chosen because they were ineligible for the study yet had experience in genetic counselor training and/or supervision. Based on pilot participants' feedback, minor revisions were made to improve clarity.

Data Collection

Survey data for genetic counselors were collected between August 18, 2011 and September 30, 2011. Survey data for genetic counseling supervisors were collected between August 18, 2011 and December 18, 2011. This investigator made up to three attempts to contact each potential telephone interviewee. Each interview was expected to take twenty to thirty minutes. Interviews with genetic counselors were completed between September 6, 2011 and October 10, 2011. Interviews with supervisors were completed between September 9, 2011 and January 9, 2012. All interviews were audio recorded and conducted by the primary investigator using a semi-structured interview format. Genetic counselors and supervisors were e-mailed the interview format ahead of time for participants to look over and begin thinking about their answers. A semi-structured format ensures that participants receive the questions in approximately the same order, while also allowing for follow-up questions and clarification of responses

(Patton, 1990). This format also allows for comparison of responses across all interviewees and by group (i.e., genetic counselor group vs. supervisor group).

Data Analysis

Surveys. Means, medians, standard deviations, *n*'s, and ranges were calculated, as appropriate, for responses to the survey items. The primary investigator, a research assistant, and a licensed psychologist independently analyzed respondents' definitions of empathy using interpretive content analysis to identify major themes (Giarelli & Tulman, 2003; p.951). Interpretive content analysis consists of identifying themes or ideas in the data that can be counted and described. Barrett-Lennard's Model of Empathy informed this data analysis as responses were compared with the three components of this model.

Interview responses. Interviews were transcribed verbatim by two undergraduate students in psychology. Data analysis was completed by two individuals: a research assistant, a beginning doctoral student in a counseling psychology program who was completing master's coursework at the time of this study, and the primary investigator. At the time of data collection, the primary investigator had been part of a co-instruction team in a basic counseling course for three years, had accrued over 200 hours of individual interviewing experience, and was a doctoral candidate in counseling psychology. Data analysis of interviews was conducted using a modified version of Consensual Qualitative Research (CQR; Hill, Thompson, & Williams, 1997; Hill et al., 2005), which involves: 1) creating domains (rationally-derived content areas) based on similar responses, 2) identifying categories within domains that more specifically reflect the core ideas therein, and 3) performing cross-analysis by tabulating frequencies of the domains and categories across cases (interview transcripts).

In this study, interview responses were examined, based on participant group (i.e., genetic counselors or supervisors), for emerging themes and trends, and domains were created by grouping together responses with similar content. Next, more specific topics within domains were extracted as categories. After the domains and categories were identified, cross analysis of the interviews was conducted to categorize the frequencies of occurrences of the categories as follows: *general* if all or all but 1 of the participants expressed the category; *typical* if the category was endorsed by half of the participants to all of the participants minus two; *variant* if the category was described by two to one less than half of the participants; and *rare* if the category was applicable to only one participant. This labeling of frequencies represents Hill et al.'s (2005) updated CQR methodology. Coding was done inclusively, allowing a response to be coded multiple times. Each team member independently coded the transcripts and met to discuss the extracted domains and categories and to reach consensus about these themes and core ideas. Discrepancies in the data were discussed until the researchers reached a consensus. Illustrative quotations were selected by the primary investigator. A licensed psychologist served as the data auditor, reviewing the groupings and selected quotations, with any disagreements being discussed to reach consensus about the final classification of the data. Finally, the primary investigator compared and contrasted domains and categories across the two participant groups.

Bracketing Biases

In order to accurately describe a phenomenon under examination, it is important to bracket one's biases, that is, state one's expectations prior to data collection and data analysis (Colaizzi, 1978). Some responses the research team expected from genetic

counselor participants include: clinical experience (as opposed to classroom training) is a primary vehicle for their development of empathy; and the supervisors who fostered their empathy growth emphasized that it is a process underlying a genetic counseling session rather than a discrete microskill which is only present during portions of the genetic counseling session. The team expected that responses from genetic counseling supervisors would include: more prevalent descriptions of empathy as a process as opposed to a discrete microskill, whereas recently graduated genetic counselors would perceive empathy as a set of psychosocial skills that are used at isolated times during a session; and descriptions of being intentional about helping students incorporate empathy in their genetic counseling sessions by using techniques, such role playing and modeling. Finally, the team expected both genetic counselors and supervisors to be more descriptive about techniques that foster the empathic experience, or the first component of the Barrett-Lennard model, as opposed to the next two components of empathic communication or patient perception of empathy.

Chapter 4: Results

This chapter begins with a description of the demographic characteristics for supervisors and genetic counselors that completed the survey and the qualitative analysis of their survey responses. Next, demographic characteristics for supervisors and genetic counselors that participated in the interview portion of this study, along with characteristics of the interviews are presented. Finally, results of the qualitative analysis of interview responses are provided, organized by major research question, and including illustrative examples.

Survey

Demographic Characteristics of Survey Respondents

Sixty-two individuals completed the genetic counselor online survey. Two were excluded because they had graduated more than four years ago, for a total sample of 60 respondents. Seventeen individuals completed the supervisor online survey. Demographic information for both groups of survey respondents is provided in Table 4.

Table 4. Demographic Characteristics of Survey Respondents

Variable	Genetic Counselors (N=60)			Supervisors (N= 17)		
	<i>n</i>	%	Mdn	<i>n</i>	%	Mdn
Age			27.5			33
Sex						
Female	59	98.3		17	100.0	
Male	1	1.7		0	0	
Other	0	0		0	0	
Prefer not to answer	0	0		0	0	
Ethnicity						
Caucasian or White	55	91.7		15	88.2	
Asian	2	3.3		2	11.8	
Bi-racial	2	3.3		0	0	
Hispanic/Chicano/Latina(o)	1	1.7		0	0	
American Indian/Alaskan Native	0	0		0	0	

Black or African American	0	0		0	0	
Native Hawaiian/Pacific Islander	0	0		0	0	
Other	0	0		0	0	
Relationship status						
Married	24	40.0		13	76.5	
Single	19	31.7		2	11.8	
In a committed relationship	16	26.7		1	5.9	
Divorced	0	0		1	5.9	
Widowed	0	0		0	0	
Other	1	1.7		0	0	
Do you have children?						
Yes	6	10.0		9	52.9	
No	54	90.0		8	47.1	
Genetic Counseling Program Accredited by ABGC						
Yes	60	100.0		17	100.0	
No	0	0		0	0	
Genetic Counseling Program Affiliation						
Medical School	34	56.7		4	23.5	
School of Public Health	6	10.0		5	29.4	
Psychology Department	0	0		0	0	
Social Work Department	0	0		1	5.9	
Other	20	33.3		7	41.2	
Current Practice Status						
Practicing Clinically	52	86.7		17	100.0	
Not Practicing Clinically	8	13.3		0	0	
Median No. of Patients/Week			7			9
Total Months of Post- Graduation Genetic Counseling Experience			18.5			95
Current Specialty						
Prenatal	17	28.3		4	23.5	
Cancer	15	25.0		4	23.5	
Pediatric	9	15.0		3	17.7	
Molecular/Cytogenetics	3	5.0		0	0	
Neurogenetics	1	1.7		1	5.9	
Psychiatric	1	1.7		0	0	
Public Health	1	1.7		0	0	
Specialty Disease	1	1.7		2	11.8	
Infertility	0	0		0	0	
Teratogen	0	0		0	0	
Other	12	20.0		3	17.7	
Work Setting						
University Medical Center	22	36.7		15	88.2	

Private hospital or facility	22	36.7		2	11.8	
Diagnostic laboratory	3	5.0		0	0	
Federal, state, county office	2	3.3		0	0	
Group private practice	1	1.7		0	0	
Health maintenance organization	1	1.7		0	0	
Individual private practice	0	0		0	0	
Other	9	15.0		0	0	
NSGC Region of Practice						
Region I (CT, MA, ME, NH, RI, VT, Canadian Maritime Provinces)	3	5.0		1	5.9	
Region II (DC, DE, MD, NJ, NY, PA, VA, WV, Quebec, Puerto Rico, Virgin Islands)	17	28.3		2	11.8	
Region III (AL, FL, GA, KY, MS, NC, SC, TN)	6	10.0		0	0	
Region IV (AR, IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI, Ontario)	14	23.3		11	64.7	
Region V (AZ, CO, MT, NM, TX, UT, WY, Alberta, Manitoba, Saskatchewan)	8	13.3		1	5.9	
Region VI (AK, CA, HI, NV, OR, WA, British Columbia)	11	18.3		2	11.8	
Other	1	1.7		0	0	
Provided Clinical Supervision						
Yes	22	36.7		17	100.0	
No	36	63.3		0	0	
Months of Supervision Provided			15			60
Number of Students Supervised			8			22.5

As shown in this table, the majority of individuals who completed the surveys were female ($n = 59$, 98.3% genetic counselors; $n = 17$, 100% supervisors), self-identified as Caucasian ($n = 55$, 91.7 % genetic counselors; $n = 15$, 88.2% supervisors), and were either married ($n = 24$, 40.0% genetic counselors; $n = 13$, 76.5% supervisors) or single ($n = 19$, 31.67% genetic counselors; $n = 2$, 11.8% supervisors). The majority of genetic counselors reported having no children ($n = 54$, 90.0%), while the majority of supervisors reported having children ($n = 9$; 52.9%). Using regions from the National Society of

Genetic Counselors (NSGC), the majority of genetic counselor respondents reported practicing in Region II (i.e., DC, DE, MD, NJ, NY, PA, VA, WV) ($n = 17$, 28.3%) followed by Region IV (i.e., AR, IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI, Ontario) ($n = 14$; 23.3%). All six regions were represented by the genetic counselors. For supervisors, the majority reported practicing in Region IV ($n = 11$, 64.7%), followed by Region II ($n = 2$, 11.8%) and Region VI (i.e., AK, CA, HI, NV, OR, WA, British Columbia) ($n = 2$, 11.8%). All regions but one (Region III) were represented by the supervisors. Median age for genetic counselor survey respondents was 27 years old, and for the supervisors it was 33 years old.

The median number of months of genetic counselor experience was 18.5 months for the genetic counselors and 95 months for supervisors. Approximately 87% of the genetic counselors were seeing patients clinically at the time of the survey ($n = 52$), while 100% of the supervisors ($n = 17$) reported seeing patients clinically. Fifty-eight genetic counselors responded to a question asking them to indicate the average number of patients they saw per week; one outlier was discarded. The median number of patients was eight for this group. Supervisors saw a median of nine patients per week. Most genetic counselors and supervisors reported practicing in a prenatal setting ($n = 17$, 28.3% genetic counselors; $n = 4$, 23.5% supervisors), or cancer genetics setting ($n = 15$, 25.0% genetic counselors; $n = 4$, 23.5% supervisors), followed by “other” settings ($n = 12$, 20.0% genetic counselors; $n = 3$, 17.6% supervisors), and a pediatric genetics setting ($n = 9$, 15.0% genetic counselors; $n = 3$, 17.6% supervisors). Respondents reported working primarily at a University Medical Center ($n = 22$, 36.7% genetic counselors; $n =$

15, 88.2% supervisors) or a private hospital ($n = 22$, 36.7% genetic counselors; $n = 2$, 11.8% supervisors).

Regarding graduate training and supervision experience, all respondents indicated that their genetic counselor training program was accredited by the American Board of Genetic Counseling (ABGC), and they reported completing a psychosocial skills course as part of their graduate training. Additionally, 37% of genetic counselor respondents ($n = 22$) reported had experience as a genetic counseling supervisor; 18 of these counselors also indicated the number of months of supervision experience (Mdn = 8 months), and 21 provided the number of students they had supervised (Mdn = 7). All supervisors ($n = 17$, 100%) reported having supervised genetic counselor trainees (Mdn = 60 months). Sixteen supervisors reported the number of students they had supervised (Mdn = 22.5).

Survey Respondents' Definitions of Empathy

Sixty genetic counselors and 17 supervisors provided written definitions of empathy. Inductive analysis of these definitions yielded three themes consistent with Barrett-Lennard's (1981) widely accepted three component model of empathy (Giarelli & Tulman, 2003). Definitions were multi-faceted and often resulted in their classification into more than one theme.

Theme 1. Barrett-Lennard Model Component 1: Empathy is the ability to understand the patient's experience ($n = 73$). Theme one refers to responses indicating that understanding includes being present, hearing the needs and feelings of patients, and being sensitive to patients' unique situations. Definitions illustrating this finding include:

“In essence, [empathy is] knowing and understanding the patient "story." I often tell students that each patient is like a one-person play and you are the director. How much of the patient's "story" you are able to get them to tell, the better your play will be.”

“[Empathy] is striving to understand and appreciate the needs, the variety of emotions experienced and the internal struggle of the patient, their family, and the patient’s perception of the self.”

Theme 2. Barrett-Lennard Model Component 2: Empathy is the ability to communicate understanding of the patient’s experience (n = 45). Theme two was extracted from definitions which included strategies to communicate empathy to the patient, including responding with authenticity, creating a comforting and welcoming environment, and reflecting back the patient’s emotions and needs. The following two examples illustrate communication strategies:

“Using body language is a powerful tool to communicate validation to a patient.”

“Empathy involves a set of skills to communicate an understanding of the patient’s lived experience in a genuine way and addresses both the explicit and implicit meaning of their feelings and experiences.”

Theme 3. Barrett-Lennard Model Component 3: Empathy is the patient’s perception of the genetic counselor’s empathic expression (n = 11). A few definitions referred explicitly to perceived empathy. Respondents’ definitions indicated a desire for the patient to feel accepted, supported, and understood as a result of the genetic counselor’s empathy expression. They also wanted patients to feel free to share their experiences openly.

“Empathy is also addressing circumstances, feelings, emotions, etc, that are and are not expressed verbally/outwardly by the client...By acknowledging these feelings the client can see that I empathize with their feelings and situation.”

“Empathy is the ability to recognize and respond to the feelings in such a way that the client feels understood and supported.”

Interviews

Demographic Characteristics of Interviewees

The sample consisted of 16 individuals who completed the genetic counselor interview and 11 individuals who completed the supervisor interview. Demographic information for the interviewees is provided in Table 5.

Table 5. Demographic Characteristics of Interview Respondents

Variable	Genetic Counselors (<i>n</i> =16)			Supervisors (<i>n</i> = 11)		
	<i>n</i>	%	Mdn	<i>n</i>	%	Mdn
Age			27.5			33
Sex						
Female	16	100.0		14	100.0	
Male	0	0		0	0	
Other	0	0		0	0	
Prefer not to answer	0	0		0	0	
Ethnicity						
Caucasian or White	15	93.7		10	90.9	
Bi-racial	1	6.3		0	0	
American Indian/Alaskan Native	0	0		0	0	
Asian	0	0		1	9.1	
Black or African American	0	0		0	0	
Hispanic/Chicano/Latina(o)	0	0		0	0	
Native Hawaiian/Pacific Islander	0	0		0	0	
Other	0	0		0	0	
Relationship status						
Married	7	43.8		9	81.9	
Single	6	37.5		1	9.1	
In a committed relationship	3	18.8		0	0	
Divorced	0	0		1	9.1	
Widowed	0	0		0	0	
Other	0	0		0	0	
Do you have children?						
Yes	3	18.8		7	63.6	
No	13	81.3		4	36.4	
Genetic Counseling Training Program Accredited by ABGC						
Yes	16	100.0		11	100.0	
No	0	0		0	0	
Genetic Counseling Program Affiliation						
Medical School	10	62.5		2	18.2	
School of Public Health	1	6.3		3	27.3	

Psychology Department	0	0		0	0	
Social Work Department	0	0		1	9.1	
Other (please specify)	5	31.2		5	45.5	
Current Practice Status						
Practicing Clinically	11	68.8		11	100.0	
Not Practicing Clinically	5	31.2		0	0	
					0	
Median No. of Patients/Week			6.5			9
Total Months of Post-Graduation Genetic Counseling Experience			23.5			95
Current Specialty						
Cancer	5	31.3		3	27.3	
Prenatal	5	31.3		2	18.2	
Psychiatric	1	6.3		0	0	
Infertility	0	0		0	0	
Molecular/Cytogenetics	0	0		0	0	
Neurogenetics	0	0		1	9.1	
Pediatric	0	0		2	18.2	
Public Health	0	0		0	0	
Specialty Disease	0	0		0	0	
Teratogen	0	0		0	0	
Other	5	31.3		3	27.3	
Work Setting						
University Medical Center	6	37.5		15	81.80	
Private hospital or facility	6	37.5		2	18.2	
Group private practice	1	6.3		0	0	
Diagnostic laboratory	0	0		0	0	
Federal, state, county office	0	0		0	0	
Health maintenance organization	0	0		0	0	
Individual private practice	3	18.8		0	0	
Other						
NSGC Region of Practice						
Region I (CT, MA, ME, NH, RI, VT, Canadian Maritime Provinces)	0	0		1	9.1	
Region II (DC, DE, MD, NJ, NY, PA, VA, WV, Quebec, Puerto Rico, Virgin Islands)	3	18.8		1	9.1	
Region III (AL, FL, GA, KY, MS, NC, SC, TN)	1	6.3		0	0	
Region IV (AR, IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI, Ontario)	5	31.3		7	63.6	
Region V (AZ, CO, MT, NM,	3	18.8		1	9.1	

TX, UT, WY, Alberta, Manitoba, Saskatchewan)						
Region VI (AK, CA, HI, NV, OR, WA, British Columbia)	3	18.8		2	18.2	
Other	1	6.3		0	0	
Provided Clinical Supervision						
Yes	4	25.0		17	100.0	
No	12	75.0		0	0	
Months of Supervision Provided			15			80
Number of Students Supervised			6			25

As shown in this table, all individuals who completed the interviews were female, most identified as Caucasian ($n = 15$, genetic counselors; $n = 10$ supervisors), and most were either married ($n = 7$ genetic counselors; $n = 9$ supervisors) or single ($n = 6$ genetic counselors; $n = 1$ supervisor). The majority of genetic counselors did not have children ($n = 13$), while the majority of supervisors reported having children ($n = 7$). The largest number of genetic counselor participants practiced in Region IV ($n = 5$), followed by equal numbers from Region II ($n = 3$), Region V ($n = 3$), and Region VI ($n = 3$). For supervisors, the majority practiced in Region IV ($n = 7$), followed by Region VI ($n = 2$). Median age for genetic counselor survey respondents was 27.5 years and for the supervisors it was 33 years.

Regarding genetic counseling experience, the median number of months of genetic counselor experience was 23.5 months for the genetic counselors and for the supervisors it was 95 months. Eleven of the genetic counselors were seeing patients clinically at the time of the interview, while all of the supervisors reported seeing patients clinically. Genetic counselors saw a median number of six patients per week, and supervisors saw a median of nine patients per week. Fifteen of the 16 genetic counselors were equally divided among three specialties: prenatal, pediatric, and cancer. Three supervisors practiced in cancer genetics and three practiced in other” settings, including

metabolic and cardiac clinics. Most interviewees worked in either a university medical center ($n = 6$ genetic counselors; $n = 9$ supervisors) or a private hospital ($n = 6$ genetic counselors; $n = 2$ supervisors).

Regarding graduate training and supervision experience, all interviewees reported their genetic counselor training program was ABGC-accredited, and they completed a psychosocial skills course as part of their graduate training. Additionally, four of the genetic counselor interviewees reported having experience as a genetic counseling supervisor, having supervised a median number of five students for a median of 15 months. Supervisors reported providing supervision for a median of 80 months and a median of 25 students.

Interview Characteristics

Twenty-seven individuals ($n = 16$ genetic counselors; $n = 11$ supervisors) completed an interview. The interviews ranged in length from 17 to 37 minutes (Mdn = 24:57 minutes). It was this investigator's opinion that, regardless of group, every participant appeared to approach the questions in a thoughtful manner. Participants received the interview questions in advance, and many reported reviewing the questions and preparing their responses prior to the interview. The interviewees responded openly to all questions and did not appear guarded in their responses. They seemed to have a good understanding of the concepts being discussed, and several asked for clarification when they were uncertain. Additionally, they appeared to be interested in the topic and eager to learn more about it as evidenced by enthusiasm voiced about this study during interviews, such as "answering these questions really helped me see how basic my empathy skills are right now and helped me bring empathy back into focus. So thank you

very much.” Another said, “Looking forward, I’m really excited to keep this definition of empathy changing and evolving. I look forward to learning more about myself and about empathy in genetic counseling.”

Qualitative Analysis of Interview Responses

In this following section, the results are organized by major research question. The specific interview questions investigating the major research question are listed, followed by domains, categories, and illustrative quotations. As mentioned previously, because interview responses are multifaceted, they may be represented in more than one domain or category, and thus *n*’s may total greater than the sample size. Domains and categories are shown by research question in Table 6.

Table 6. Domains and Categories by Major Research Question and Related Interview

Questions

Research Ques 1. To what do supervisors and genetic counselors attribute their understanding of empathy and how has it changed?

<u>Domain/Category</u>	<u><i>n</i>^a</u>	<u>CQR Descriptor</u>
Definition of Empathy		
Domain 1. Training	15/7	
Category 1. Genetic Counselor training	14/7	Typical/Typical
Category 2. Other training	2/1	Variant/Rare
Domain 2. Instinctual	6/3	
Category 1. Definition was not taught; interviewee developed it	5/2	Variant/Variant
Category 2. Came naturally; instinctual	2/1	Variant/Rare
Domain 3. Reading	6/1	
Category 1. Genetic counseling materials	6/1	Variant/Rare
Category 2. Other reading	1/0	Rare/None
Domain 4. Experience	5/7	
Category 1. Professional experience	5/7	Variant/Typical
Category 2. Personal experience	2/3	Variant/Variant
Change in Definition		
Domain 1. Definition has changed	16/6	
Category 1. Empathy is beyond emotion recognition	6/4	Variant/Variant

Category 2. Definition now tailored to genetic counseling	4/1	Variant/Rare
Category 3. Empathy is different from sympathy	4/1	Variant/Rare
Category 4. Perceive empathy as more tangible	2/1	Variant/Rare
Domain 2. No change in definition	0/5	
Understanding of Empathy		
Domain 1. Understand empathy	11/8	
Category 1. Good understanding	8/8	Typical/Typical
Category 2. Basic understanding	3/0	Variant/None
Domain 2. Still learning	10/4	
Domain 3. Empathy in genetic counseling is like empathy in other settings	1/1	
Genetic Counselor's Use of Empathy in Session³		
Domain 1. Comfort with Using Empathy	6	
Category 1. Increased comfort and confidence in using empathy	5	Variant
Category 2. Feels more natural with experience	3	Variant
Domain 2. Understanding of the Concept	5	
Category 1. Understand improved	4	Variant
Category 2. Empathy isn't sympathy	3	Variant
Domain 3. Recognizing the impact of empathy on the patient	4	
Category 1. Patient receipt of empathy	3	Variant
Category 2. Increased importance of psychosocial aspects	2	Variant
Genetic Counselor Attribution of Empathy Changes³		
Domain 1. Professional Activities	12	
Category 1. Clinical Experience	9	Typical
Category 2. Supervision group/discussions with colleagues	3	Variant
Category 3. Self-reflection	2	Variant
Category 4. Readings	2	Variant
Domain 2. Graduate Training	4	
Category 1. General educational activities	4	Variant
Category 2. Role Playing	2	Variant
Supervisor Changes in Empathy Pedagogy⁴		
Domain 1. Understanding of empathy has evolved	8	
Category 1. More focus placed on empathy	7	Typical
Category 2. Recognition of difficulty of empathy use	2	Variant
Domain 2. Teaching methods have changed	5	
Category 1. Create developmentally appropriate challenges	3	Variant
Category 2. Break empathy into steps	2	Variant

Supervisor Attribute Changes in Empathy Fostering⁴

Domain 1. Professional Experience	10	
Category 1. Counseling Experience	7	Typical
Category 2. Supervision Experience	4	Variant

Trajectory of Empathy Understanding

Domain 1. Always Learning	9/5
Domain 2. Graduate School	4/0
Domain 3. Innate Skills	2/5
Domain 4. Professional Experience	1/4
Domain 5. Dependent upon qualities of the student	0/7

Research Ques 2: How do genetic counselors and supervisors describe what empathy looks like in sessions?

<u>Domain/Category</u>	<u>n^a</u>	<u>CQR Descriptor</u>
Domain 1. Empathic Expression	15/11	
Category 1. Empathy statements	14/10	Typical/General
Category 2. Body language	5/6	Variant/Variant
Category 3. Silence	3/3	Variant/Variant
Category 4. Asking questions	3/1	Variant/Rare
Domain 2. Empathic Engagement	14/9	
Category 1. Listening/Attending	11/3	Typical/Variant
Category 2. Understanding/Taking patient perspective	8/6	Typical/Typical
Domain 3. Patient's Receipt of Empathy	12/10	
Category 1. Patient feels understood	11/9	Typical/Typical
Category 2. Feel a sense of safety and support	5/5	Variant/Variant
Category 3. Feels genetic counselor will address their concerns	3/0	Variant/None
Category 4. Patient's negative reaction	2/0	Variant/None
Domain 4. Emotional Experience	5/4	
Category 1. Positive emotional experience	3/3	Variant/Variant
Category 2. Sympathy	2/0	Variant/None
Domain 5. Professionalism and Awareness of Boundaries	1/2	

Examples of Effective Empathy

Domain 1. Genetic Counselor Verbal Skills	10/9	
Category 1. Validated and acknowledged emotion	10/8	Typical/Typical
Category 2. Discussing cultural factors	0/2	None/Variant
Domain 2. Genetic Counselor Nonverbal Skills	7/9	
Category 1. Connection/Rapport was built	7/6	Variant/Variant
Category 2. Body Language was effective	1/4	Rare/Variant
Domain 3. Observed Patients' Nonverbal Reactions	8/8	
Category 1. Perception that patient feels positive affect	10/2	Typical/Variant
Category 2. Body language change	4/5	Variant/Variant
Category 3. Patient attended to counselor (not	0/2	None/Variant

supervisor)		
Domain 4. Observed Patients' Verbal Reactions	3/9	
Example of Empathy Not Present in Session		
Domain 1. Specific Example	9/7	
Category 1. Missed Chance to be Empathic	4/4	Variant/Variant
Category 2. Patient Variables	6/0	Variant/None
Category 3. Genetic Counselor Affect	1/3	Rare/Variant
Domain 2. General Examples	8/5	
Category 1. Missed Opportunity to respond empathically	4/4	Variant/Variant
Category 2. Genetic Counselor factors	1/1	Rare/Rare
What Could Genetic Counselor Do Differently		
Domain 1. Genetic Counselor Could have Used Verbal Skills	7/5	
Category 1. Responded verbally to emotion	6/5	Variant/Variant
Category 2. Not so information focused	1/0	Rare/None
Domain 2. Genetic Counselor Could Have Used Nonverbal Skills	4/7	
Category 1. Established rapport	2/3	Variant/Variant
Category 2. Listened	0/3	None/Variant
Category 3. Attended to patient's needs	3/5	Variant/Variant
Domain 3. Genetic Counselor Preparation for Session	3/2	
Domain 4. Unsure what to do differently	2/0	

Research Ques 3: How is genetic counselors' empathy development fostered in graduate training programs?³

<u>Domain/Category</u>	<u>n^a</u>	<u>CQR Descriptor</u>
Domain 1. Genetic Counseling Coursework	16	
Category 1. Discussing cases/talking about empathy	10	Typical
Category 2. Psychosocial skills class	8	Typical
Category 3. Role playing	7	Variant
Category 4. Reading	3	Variant
Category 5. Writing exercises	3	Variant
Category 6. Reviewing tapes of role plays and sessions	2	Variant
Domain 2. Empathy is Innate	6	
Domain 3. Learned more through experience, not didactic courses	3	
Domain 4. Methods that were not helpful	7	
Category 1. Role plays were not helpful	3	Variant
Category 2. Written exercise were not helpful	2	Variant
Category 3. Psychosocial skills course not helpful	1	Rare
Category 4. Readings not helpful	1	Rare

Research Ques 4: What specific methods do genetic counselors perceive their supervisors using to develop their empathy? What specific methods do supervisors

use to develop empathy?

<u>Domain/Category</u>	<u>n^a</u>	<u>CQR Descriptor</u>
Domain 1. Reflection	13/7	
Category 1. Verbal post-session reflection	12/6	Typical/Typical
Category 2. Writing about empathy/emotion	2/2	Variant/Variant
Domain 2. Anticipatory guidance	6/9	
Category 1. Prep for psychosocial opportunities	4/8	Variant/Typical
Category 2. Role Plays	2/5	Variant/Variant
Category 3. Assigned readings	0/2	None/Variant
Domain 3. Supervisor prioritizes empathy	6/0	
Domain 4. Observation	2/6	

Research Ques 5: How do supervisors assess empathy development in genetic counseling students?⁴

<u>Domain/Category</u>	<u>n^a</u>	<u>CQR Descriptor</u>
Evaluation of Genetic Counselors Ability to Experience Empathy		
Domain 1. Observe genetic counselor reaction	8	
Domain 2. Observe patient reaction	5	
Domain 3. Reflection	4	
Evaluation of Genetic Counselors Expression of Empathy		
Domain 1. Observe genetic counselor reaction	9	
Domain 2. Observe patient reaction	6	
Evaluation of Patients' Receipt of Empathy		
Domain 1. Observe patient nonverbal response	10	
Domain 2. Observe patient verbal response	4	
Domain 3. Patient feedback form	1	
Evaluation of Empathy Development		
Domain 1. Developing Skills	11	
Category 1. In session skills observed	11	General
Category 2. Observe reflection following session	3	Variant
Domain 2. Difficulty Developing Skills	11	
Category 1. Explicitly teach skills and talk about empathy	10	General
Category 2. Help students prepare for sessions	5	Variant
Category 3. Provide feedback of sessions	4	Variant

Note. ^aUnless otherwise specified, x/y indicates genetic counselor/supervisor; ^bOnly genetic counselors responded to this question; ^cOnly supervisors responded to this question.

Consistent with Hill et al.'s (2005) terminology regarding frequency of categories: General = 15-16/10-11 cases; Typical = 8-14/6-9 cases; Variant = 2-7/2-5 cases; and Rare = 1 case; None = 0.

Research Question 1: To what do genetic counselors and supervisors attribute their understanding of empathy and how has it changed? Genetic counselors and supervisors responded to interview questions asking them to elaborate on their survey definitions in order to determine where they feel they learned empathy and the impact of training on their theoretical understanding of empathy. These questions included, “Where did you learn this definition of empathy?,” “How is this definition different, if at all, from when you started in your genetic counselor training program?,” and “How well do you feel like you understand empathy in genetic counseling?” To gauge more practical application of the concept of empathy, genetic counselors were asked how their understanding and use of empathy in session has changed since they began their training program, while supervisors were asked how their teaching of empathy has changed since they began working as a supervisor and to what they attribute these changes. Genetic counselors were also asked when they felt they finally “got” what empathy is all about with respect to patient, while supervisors were asked to contemplate when students finally get what empathy is all about with regard to patients.

Definition of Empathy. Genetic counselors and supervisors were asked where they learned their definition of empathy and how this theoretical concept has changed for them since beginning training. Every interviewee responded to the first question, and their responses yielded four domains: (1) Training; (2) Instinctual; (3) Reading; and (4) Life Experience. There are a total of eight categories within these domains.

Domain 1. Training (n = 15 genetic counselors, n = 7 supervisors). The majority

of genetic participants learned their definition from formalized training. There are 2 categories.

Category 1. Genetic Counselor training (n = 14 genetic counselors, n = 7 supervisors)

- “I came to that definition mainly through my training in my genetic counselor degree program...I remember one of my teachers describing it as imagining yourself in your patient’s shoes.”
(Genetic Counselor)
- “In graduate training. We had a course on counseling techniques that we took with the counseling students and a large part of it was discussing empathy and using empathy in genetic counseling.”
(Supervisor)

Category 2. Other training (n = 2 genetic counselors; n = 1 supervisor)

- “Probably the first time that I really thought about it was when I did my training in active listening skills...when I volunteered on a crisis line.”
(Genetic Counselor)
- “A combination of the psychology program I was in and I think the genetic counseling program I was in.”
(Supervisor)

Domain 2. Instinctual (n = 6 genetic counselors, 3 supervisors). Genetic counselors and supervisors talked about their definitions as being instinctual and as stemming naturally from their own experiences. There are two categories in this domain.

Category 1. Definition wasn’t taught; it is one’s personally developed definition (n = 5 genetic counselors; n = 2 supervisors)

- “It’s not that I looked up the definition; that was something that came up off the top of my head.”
(Genetic Counselor)
- “I went to school twenty years ago so [my definition] certainly was not taught to me since I remember almost nothing...so it’s my definition, what I came up with.”

(Supervisor)

Category 2. Definition comes naturally; is instinctual (n = 2 genetic counselors, n = 1 supervisor)

- “I feel like empathy is sort of hard to define because in a lot cases it sort of happens naturally.” (Genetic Counselor)
- “For me it was kind of instinctual, I guess. It just also has evolved over, you know, basically my life and working with people.” (Supervisor)

Domain 3. Reading (n = 6 genetic counselors; n = 1 supervisor). This domain refers to genetic counselors’ definitions stemming from material they had read, which included both genetic counseling textbooks and articles. One individual talked about how her personal reading has enhanced her understanding of empathy and influenced her definition. There are two categories in this domain.

Category 1. Genetic counseling materials (n = 6 genetic counselors; n = 1 supervisor)

- “[My definition] is my beginning understanding of empathy that I’ve developed through training, really reading *Facilitating the Genetic Counseling Process* helped me a lot. I felt like it was the most specific source talking about empathy and specific examples of empathy.” (Genetic Counselor)
- “The written definition in the Baker, Schuette, and Uhlmann book is definitely what we were taught in grad school, and I think is a very good, succinct explanation of what empathy should be.” (Supervisor)

Category 2. Other reading (n = 1 genetic counselor, n = 0 supervisors)

- “I like to read novels and also journal articles and in the reading that I do I tend to relate anything that seems relevant to my understanding of empathy. So I would say that I’ve probably been influenced over time and that’s how I explain it to other people.” (Genetic Counselor)

Domain 4. Life Experience (n = 5 genetic counselors, n = 7 supervisors).

Personal and professional life experiences were also influential in empathy definitions, more so for supervisors than for genetic counselors. There are two categories.

Category 1. Professional experience (n = 5 genetic counselors, n = 7 supervisors)

- “It’s primarily lectures where we learn about different forms of empathy, but I think it makes more sense when we can see it in our clinical rotations...when we experience [it], that really gives us a deeper understanding of what we learn in class.”
(Genetic Counselor)
- “My professional experience, and then different readings from books that talk about counseling or discussions with colleagues.”
(Supervisor)

Category 2. Personal experience (n = 2 genetic counselors, n = 3 supervisors)

- “Whether you are connecting with any other person, whether it is a patient or just someone else you know, then you use those empathy skills.”
(Genetic Counselor)
- “Even when I’m not counseling somebody for a genetic condition, the same empathizing and trying to understand where somebody’s coming from has been something I’ve had to learn to use myself in day to day life. So I think it’s been something I’ve learned both inside and outside of the work area.” (Supervisor)

Changes in Empathy Definition. Every participant responded to a question about whether their definition was different from what it would have been before they started their training program. All of the genetic counselors perceived their definition as changing, at least in part, because of their training program, while some supervisors reported their definition had not changed as a result of their genetic counselor training. Their responses to this question yielded two domains: (1) Definition has changed; and (2)

No change in definition. There are a total of four categories.

Domain 1. Definition has changed (n = 16 genetic counselors, n = 6 supervisors).

All of the genetic counselor interviewees reported their definition had changed since their training program while a few supervisors reported a change in their definition. Four categories variously describe these changes as a realization that: empathy is a process which includes not only emotion recognition, but also rapport-building and nonverbal skills; one's definition of empathy changed to be more specific to genetic counseling as a result of experience working with patients; empathy is different from sympathy; and empathy feels more natural, internal, and tangible over time.

Category 1. Empathy is beyond emotion recognition (n = 6 genetic counselors,

n = 4

supervisors)

- “I think after the training program...you really do start to get a grasp that it's not just the emotions, it's everything, it's the relationship.”
(Genetic Counselor)
- “Empathy is so much more of a process. It's a communication piece that's not necessarily having empathy about the immediate, overt messages that the client is saying, but really trying to look at the pattern of messages and more of an advanced empathy...that understanding is much deeper.”
(Supervisor)

Category 2. Definition now tailored to genetic counseling (n = 4 genetic

counselors; n = 1 supervisors)

- “I think my definition is definitely more geared towards genetic counseling or seeing patients as compared to someone in a different job who might have a different definition of it.”
(Genetic Counselor)
- “So now I think empathy is helpful in terms of its emotional side but also helps you to figure out what your role needs to be in terms of their care provider.”
(Supervisor)

Category 3. Empathy differs from sympathy (n = 4 genetic counselors; n = 1 supervisor)

- “When I started in my training program, I didn’t really understand what empathy was, where now I can at least define it as how it’s different from sympathy and how empathy might look in a session.”
(Genetic Counselor)
- “I think [my definition] has probably broadened quite a bit from when I first started my genetic counselor training program. The big thing I remember learning is the difference between sympathy and empathy, so I always try to keep that in mind when I am talking about or thinking about empathy.” (Supervisor)

Category 4. Perceive empathy as more tangible (n = 2 genetic counselors, n = 1 supervisors)

- “I remember first being introduced to the whole concept of empathy in my training. Certainly, I have become more comfortable describing what it is because as you experience what empathy is and having empathy for patients, it becomes less conceptual and a little more tangible.”
(Genetic Counselor)
- “I don’t think I had a good understanding of it until I was in a session and faced with trying to provide empathy to clients. Getting more experience over time...I just have a better understanding of empathy.” (Supervisor)

Domain 2. No change in definition (n = 0 genetic counselors; n = 5 supervisors).

Only a few interviewees, all supervisors, reported no change in their definition. Although they did not perceive a change in their definition, they did mention their use and understanding of empathy has changed as a result of training and experience. Their responses were not categorized further due to their straightforward nature.

- “Now I understand it more internally. I don’t think the definition has changed but I feel like now I just get it.”
(Supervisor)

- “I don’t know if it is different. I think there is a difference between truly experiencing empathy for someone and using empathy as a technique for counseling and I think I have better appreciation for that now but I don’t think my definition has really changed.”
(Supervisor)

Understanding of Empathy. Every interviewee commented on how they feel like they understand empathy within the context of genetic counseling. Their responses indicate that most feel they have a good understanding of empathy in genetic counseling and also many feel as if they are still learning. Three domains include: (1) Understand empathy; (2) Still learning; (3) Compared empathy in genetic counseling to empathy in other settings. There are a total of two categories.

Domain 1. Understand empathy (n = 11 genetic counselors; n = 8 supervisors).

Genetic counselors and supervisors varied in their perceptions of how well they understand empathy in genetic counseling, with most saying they have at least a good understanding. There are two categories.

Category 1. Good understanding (n = 8 genetic counselors; n = 8 supervisors)

- “I feel comfortable with my understanding of this concept as it is used in [genetic counseling].”
(Genetic Counselor)
- “I think I understand it pretty well...I do think of myself as sort of a psychosocial type of person and a genetic counselor.”
(Supervisor)

Category 2. Basic understanding (n = 3 genetic counselors; n = 0 supervisors)

- “I certainly understand the basics of it.” (Genetic Counselor)

- “I’m still learning what empathy is in the genetic counseling setting...I have a basic understanding, but I don’t feel that I understand it very well.”

(Genetic Counselor)

Domain 2. Still learning (n = 10 genetic counselors; n = 4 supervisors). This domain reflects the responses by many individuals that their understanding of empathy in genetic counseling is evolving with time and experience. Given their straightforward nature, these responses were not broken into further categories.

- “I think I have a good grasp of it, but I think its one of those things that needs to be practiced over and over again. It’s one of those things I find myself coming back to and really working on over time.”
(Genetic Counselor)
- “I think I understand it well, but it’s a thing that I continue to be challenged throughout my career to really rise to and something that I aspire to make a regular part of my practice. But I feel like I have to keep working at it.”
(Supervisor)

Domain 3. Compared empathy in genetic counseling to empathy in other settings (n = 1 genetic counselor; n = 1 supervisor). A couple of interviewees described how they perceive empathy in genetic counseling compared to their experience of empathy in other settings.

- “I know there is a difference in how I react to people when I’m in a session with them than how I interact with people on a day to day basis or on a personal basis. I’m not sure how much of that is really a difference in the empathy or if it’s a difference in the professional setting.”
(Genetic Counselor)
- “I don’t think [empathy] is any different in genetic counseling than in a typical therapy counseling session. I think there’s a lot of similarities, and I think I would be hard pressed to give specifics as to how it is different.”
(Supervisor)

Genetic Counselor Use of Empathy in Session. Within this section, genetic counselor interviewees only (n=16) were asked about their use of empathy, how it has

changed since they started their genetic counselor training program, and to what they attribute these changes. Their responses yielded three domains: (1) Comfort with using empathy; (2) Understanding of the concept; and (3) Recognizing the impact of empathy on patients. There are a total of six categories.

Domain 1. Comfort with Using Empathy (n = 6 genetic counselors). A few genetic counselors described increased confidence in using empathy in sessions and that their use of empathy has come to feel natural, as illustrated in two categories:

Category 1. Increased comfort and confidence that comes with knowledge and experience (n = 5 genetic counselors)

- “For me, it’s a change in confidence, and it’s a comfort, and I feel like I have a better comfort level with patients, and I think that just comes with time.”

(Genetic Counselor)

Category 2. Feels more natural with experience (n = 3 genetic counselors)

- “I think that over time you realize that this is just a normal human interaction. It comes more naturally, maybe not to everyone but to a lot of people, than you think it does. It’s nothing to worry about! Like when you are a student, you’re like “Oh my gosh! I don’t know if I’m going to be empathic. So what comes off as a hard skill, I think, we really learn just comes naturally.” (Genetic Counselor)

Domain 2. Understanding of the Concept (n = 5 genetic counselors). A few individuals described their use of empathy as having changed as a result of their understanding of the concept and/or in their ability to differentiate empathy from sympathy. There are two categories.

Category 1. Understanding improved (n = 4 genetic counselors)

- “...I think it’s probably my understanding has improved a lot. It’s probably not perfect still...I know I can stop myself in sessions now and think ‘I’m being empathic right now’.”

(Genetic Counselor)

Category 2. Empathy is not sympathy (n = 3 genetic counselors)

- “I was not completely cognizant and well aware of the difference between empathy and sympathy. I used to think of sympathy as being more like empathy, but in reality, it’s not. So that distinction has changed over time since I trained for genetic counseling.”
(Genetic Counselor)

Domain 3. Recognizing the impact of empathy on patients (n = 4 genetic counselors). Three genetic counselors described becoming more “patient-focused,” attending to how their patients receive their empathy during sessions. Two categories emerged here. The first includes an awareness for whether the patient is receiving the empathy. The second category includes genetic counselors who felt that the importance of empathy in sessions has increased and they have become less focused on information-giving.

Category 1. Patients’ Receipt of Empathy (n=3 genetic counselors)

- “I’m learning to make it less about me and now gauging if my empathy is being received by the patient...I look for cues on how that patient feels and whether or not they are receiving or understanding that I’m trying to be empathic with them.”
(Genetic Counselor)

Category 2. Increased importance of psychosocial genetic counseling (n= 2 genetic counselors)

- Definitely when I started working, I was mainly just focusing on giving the people the right information. The psychosocial part would make me a little nervous and I felt like I wasn’t good at doing empathy. I think I’m still trying to develop that.
(Genetic Counselor)

Genetic Counselor Attribution of Empathy Changes. The genetic counselor participants were also asked about the changes in their use of empathy since they started their graduate training program. When asked to what they attributed the changes, two

domains emerged: (1) Professional activities; and (2) Graduate training. There are a total of six categories.

Domain 1. Professional Activities (n = 12 genetic counselors). Most counselors cited professional experiences and activities. These experiences varied and are illustrated in four categories.

Category 1. Clinical Experience (n = 9 genetic counselors)

- “Just being with the different patient populations that I serve and hearing their stories and fears and seeing that these are true validated fears and concerns has really increased my empathy.”
(Genetic Counselor)

Category 2. Supervision group/discussions with colleagues (n = 3 genetic counselors)

- “I take part in a care supervision group, and I’ve been doing that ever since I graduated. I think that has been very helpful to me in developing my overall counseling skills. It has also allowed me to explore cases that have been difficult, and often those are the cases that are difficult because it was hard to achieve empathy with the patient.”
(Genetic Counselor)

Category 3. Self-reflection (n = 2 genetic counselors)

- “I do still try to reflect on a session, so that helps me develop as well, rather than just going along every day. But thinking back to what went well, what didn’t go well, what should I do differently, those types of things. I do a kind of self-analysis.”
(Genetic Counselor)

Category 4: Readings (n = 2 genetic counselors)

- “I felt like reading *Facilitating the Genetic Counseling Process* book helped give me more specific...ways I could incorporate empathy skills into my practice.”
(Genetic Counselor)

Domain 2. Graduate Training (n = 4 genetic counselors). A few genetic counselors spoke of activities in their training program that were meaningful in helping

them develop empathy. Two categories concern broad educational activities, such as attending lectures, class discussion, and readings, and a more specific activity of role plays.

Category 1. General educational activities (n = 4 genetic counselors)

- “Just talking through things with classmates and supervisors and focusing...keeping empathy on the mind all of the time and discussing it and using it on a day to day basis.” (Genetic Counselor)

Category 2. Role Playing (n = 2 genetic counselors)

- “Partly it was just the in-class work and practicing reflecting back and forth to each other and doing role playing and thinking about how, if he said this, how do you think somebody else might respond.” (Genetic Counselor)

Changes in Supervisors’ Empathy Pedagogy. The supervisors ($n = 11$) were asked to describe specifically how their fostering of empathy in students has changed over time since they first began working as a supervisor and to identify what has led to these changes. Responses to the first question about changes in empathy pedagogy yielded two domains: (1) Understanding of empathy has evolved; and (2) Teaching methods have changed. There are a total of four categories.

Domain 1. Understanding of Empathy has Evolved (n = 8 supervisors). Many supervisors described their increased focus on empathy in their supervision. A couple also commented on their heightened awareness of the difficulty of empathy for genetic counseling students. There are two categories.

Category 1. More focus placed on empathy (n = 7 supervisors)

- “Initially, I was pretty focused on the logistics and being sure that the students knew all the stats, whereas now I like to think I’ve put more equal focus on those things as well as the psychosocial skill development.” (Supervisor)

Category 2. Recognition that empathy is difficult for students (n = 2

supervisors)

- “Recognizing that this is an area of genetic counseling, I think, that is more difficult for students than the information part, more anxiety provoking than the information part. Certainly, [empathy is] more challenging to most of them.”

(Supervisor)

Domain 2. Teaching Methods have Changed (n = 5). Within this domain, supervisors talked specifically about the pedagogical interventions they were using at the time of their interview to improve their students’ empathy and how these interventions differ from when they first started as a supervisor. Their responses yielded two categories. The first category represents supervisors who described an increased awareness of a student’s developmental status with relation to empathy and their attempts to teach empathy at this level. The second category includes supervisors who have begun teaching empathy in incremental steps to make it more palatable to students.

Category 1. Create developmentally appropriate challenges (n = 3

supervisors)

- “Being able to broaden my skills and techniques of working with students and gain an understanding of where they are coming from, if they even understand what [empathy] is, if they understand that it is important, and letting the student tell me their view before I try to help them understand it. It’s developmental... not necessarily anything that can be rushed or found with a great deal of pressure.”

(Supervisor)

Category 2. Break empathy into steps (n =2 supervisors)

- “Even in empathy, we try to break it down into bits so that they’re not trying everything in the first few sessions. So in the first few sessions, the student will do part of the session and I’ll do a part of the session and I’ll try to role-model certain things and then afterward we talk about that. I’ll tell them “this is what I was trying’ or ‘this is where I was going with

that.’ And in week two, we build on that a little bit and in week three, we add onto that or we practice more of what happened if week two, if they aren’t ready so they become confident and when they become confident they are willing to take more risks and challenge themselves more.”

(Supervisor)

Supervisors’ Perceptions of Factors Influencing how they Foster Empathy

Domain 1. Professional Experience (n = 10 supervisors). Eleven supervisors responded to this question and all reported changes in how they foster empathy. One domain and two categories reflect their perceptions of the factors that influenced these changes, specifically, professional experience, including their own experiences as a genetic counselor, and their experiences as supervisors.

Category 1. Counseling experience (n=7 supervisors)

- I think now I’m more likely to address [empathy]. I think I challenge students more to use empathy. I challenge them and talk about it and force them a little bit more and say ‘You know what? You can do this.’” Supervising students, like I think [empathy] is very important, probably because I think I have seen it be successful in my own counseling...I know how effective it can be when used effectively. I think I’m more at ease talking about it because I am just more comfortable with the whole concept itself.”
(Supervisor)

Category 2. Supervision experience (n = 4 supervisors)

- “Once you have had many students and seen their struggles, you can pick up easier on those difficulties, you can start working on those sooner. It is primarily experience-based. Now I try to figure out what barriers come up for students. Often they are too focused on the science or not comfortable with the psychosocial aspects. I’ve seen these struggles and used role playing and preparation so students have a better platform when going into the room.”

(Supervisor)

Perceived Trajectory of Empathy Understanding. Genetic counselors were asked when they finally got what empathy is about with respect to patients. Supervisors were asked when they perceive students as finally getting what empathy is all about with

regards to patients. Five domains with no separate categories reflect their responses. Some differences were noted in their responses, likely attributable to the wording of the questions. The categories are: (1) Always learning; (2) Graduate school; (3) Innate ability; (4) Professional experience; (5) Dependent upon student characteristics.

Domain 1. Always Learning (n = 9 genetic counselors, n = 5 supervisors). Many interviewees commented that genetic counselors are never done learning about empathy, and that understanding of empathy is an evolving process.

- “I don’t know that it’s necessarily something that I’m ever going to get or that I should get. As part of our development, we are a work in progress forever, and I kind of feel like empathy is like that, too.”
(Genetic Counselor)
- “I’m not sure that students ever get it. I’m not sure I ever do. It’s this evolving concept.”
(Supervisor)

Domain 2. Graduate School (n = 4 genetic counselors; n = 0 supervisors). A few genetic counselors and no supervisors reported feeling as if they “got” empathy while still in graduate school.

- “I definitely remember when I graduated feeling like I know what [empathy] is. I may not have had a lot of experience with it or I must [not] have a lot of comfort with it, but I have experienced it and I can describe it.” (Genetic Counselor)
- “Well, definitely during my training. I’m trying to reflect back and think if I had an ‘aha moment.’ I think when the definition was laid out and I think when it was compared to sympathy, that’s when I went, ‘Oh! That’s the difference’.”
(Genetic Counselor)

Domain 3. Innate ability (n = 2 genetic counselors; n = 5 supervisors). Both genetic counselors and supervisors described empathy as being an innate ability; something that some individuals just seem to “have,” while others struggle to develop

empathy.

- “I actually kind of feel like it is something that I’ve always got because I feel like that[‘s] more my natural side. I’ve always had an interest in listening, and it’s basically something that I’ve worked on developing over time. So I would say it’s something that has always kind of been present.”
(Genetic Counselor)
- “I think they get it, and I think they probably get it without even having a name to it. I think our students come into the program and they are very empathetic, and one of the things that we do is maybe label it and make them aware of it. They come in with the basics, and we just enhance those skills.” (Supervisor)

Domain 4. Professional Experience (n = 1 genetic counselor; n = 4 supervisors).

One genetic counselor and a few supervisors described professional experience as leading to “getting” empathy.

- “I remember this one case [of mine] where it worked, and I was happy, and so I think that is when I kind of got it and saw how it could possibly effect an interaction with a patient.”
(Genetic Counselor)
- “Rarely do students get it when they’re in school. I see ‘aha moments’ throughout, but it’s still a struggle. I think you get the most experience of the psychosocial stuff once you’re out on your own.”
(Supervisor)

Domain 5. Timing is dependent on student characteristics (n = 0 genetic counselors; n = 7 supervisors). Many supervisors reflected that genetic counselors tend to be variable in the timing of when they really “get” empathy. As genetic counselors asked to speak about their own empathy trajectory, and not about genetic counselors, in general, as supervisors did, this domain was not endorsed by any genetic counselors.

- “Depends on the student. Some never get it. And some come with it at the start of the rotation. It’s really varied.”
(Supervisor)
- “I think it’s different from person to person. I think that some people, for

whatever reason, just get it a little bit faster than others.” (Supervisor)

Research Question 2: How do genetic counselors and supervisors describe what empathy looks like in sessions? The genetic counselors and supervisors were asked a series of interview questions corresponding with Barrett-Lennard’s (1981) three-component model to further understand the nature of empathy specifically within the genetic counseling setting. These questions included “What does empathy look like with genetic counseling patients?” “What do you say or do?” “What do you experience when empathy is present?” and “What does the patient perceive?” Participants’ responses were coded into five domains: (1) Empathic expression; (2) Empathic engagement; (3) Patient’s receipt of empathy; (4) Emotional experience; and (5) Professionalism. There are a total of 12 categories.

Domain 1. Empathic Expression (n = 15 genetic counselors; n = 11 supervisors).

Nearly all of the participants identified ways in which their empathy involves communicating their empathic understanding to their patients. Four categories that reflect the various methods of empathic expression they use.

Category 1. Empathy statements (n = 14 genetic counselors; n = 10 supervisors)

- “It’s about reflecting what I hear from the patient. Also summarizing what they are saying. Sometimes I see reflection as literally repeating what they said, and by doing that they feel heard, while summation is usually saying what they’re saying in a different way or even rephrasing it in a different way that says something they didn’t say but meant to say.”
(Genetic Counselor)
- “Reflecting back the words that they are saying or the essential emotion that you are recognizing is sort of what empathy looks like in a session.”
(Supervisor)

Category 2. Non-verbal behaviors (n = 5 genetic counselors, n = 6

supervisors)

- “I think a big one is body language. It can really help if they are going through a hard time and you lean forward and you are right by them. That can communicate a lot when words can’t.”
(Genetic Counselor)
- “I think the nonverbal communication that somebody has with their patient is in many cases what empathy looks like. It could be making tissues available...just a gentle touch on the arm for some patients, or it could be even body positioning to show you are focused and engaged.”
(Supervisor)

Category 3. Silence (n = 3 genetic counselors, n = 3 supervisors)

- “I think silence is really key...silence is one of the best ways to show empathy and it’s a good way to break bad news. Give them a second, let it sink in, understand that it is going to have an impact.”
(Genetic Counselor)
- “Nonverbal stuff...how much silence you leave in the room.”
(Supervisor)

Category 4. Asking questions (n = 3 genetic counselors; n = 1 supervisor)

- “I think of being empathetic and I see me as a genetic counselor asking questions, trying to understand more about what patients are saying...And I think it’s just about asking the right questions and requesting back the patient’s interpretation.”
(Genetic Counselor)
- “I think asking questions, open-ended questions in a sensitive and probing way. I always tell students that if you’re talking more at the beginning of the session than the patient is, then you’re not listening.”
(Supervisor)

Domain 2. Empathic Engagement 1 (n = 14 genetic counselors, n = 9

supervisors). Many of the interviewees described the “source” of their empathy as grounded in attempts to cue into the patient’s emotions by listening to patients/attending to their verbal and nonverbal cues, and taking the patient’s perspective. There are two

categories.

Category 1. Listening/attending (n = 11 genetic counselors; n = 3

supervisors)

- “Listening is definitely a big one, and that’s something that some people think of as easy, but it’s really the most important part of empathy.”
(Genetic Counselor)
- “Taking the time to listen to the patient talk about what brings them in today and what their concerns are and what their understanding is up to the point of getting there [to the session].”
(Supervisor)

Category 2. Understanding/taking patient perspective (n = 8 genetic

counselors; n = 6 supervisors)

- “Putting yourself in their shoes and trying to imagine what it must be like to go through what they are going through, and you understand how they must be feeling.”
(Genetic Counselor)
- “Getting to know them and hearing a lot of what they’ve been through and what it’s been like for them.”
(Supervisor)

Domain 3. Patient’s Receipt of Empathy (n = 12 genetic counselors; n = 10

supervisors). Many genetic counselors and all but one supervisor mentioned the patient’s receipt of the genetic counselor’s empathy or perception of the session as an important aspect. Three categories variously describe the importance of the patient feeling understood, safe and supported, and believing the counselor will address their concern. A fourth category reflected responses by two interviewees who described empathy as being perceived negatively by the patient.

Category 1. Patient feels understood (n = 11 genetic counselors; n = 9

supervisors)

- “I think they perceive understanding. They feel listened to and really

heard.”
(Genetic Counselor)

- “I think they perceive that [the counselor] understands them or understands what they are experiencing.”
(Supervisor)

Category 2. Feel a sense of safety and support (n = 5 genetic counselors; n = 5

supervisors)

- “They perceive that I care and that I am supportive of them.”(Genetic Counselor)
- “Perhaps a trust also between the patient and the counselor and just feeling safe to talk openly.”
(Supervisor)

Category 3. Believes genetic counselor will address their concerns (n =3 genetic

counselors; n = 0 supervisors)

- “Hopefully they perceive me as a medical professional willing to listen to what they are really saying and address their real concerns.”
(Genetic Counselor)
- “I genuinely do care...and I hope that’s what they’re perceiving. I want to help them work through some of the issues and at least be able to address them.”
(Genetic Counselor)

Category 4. Patients had a negative reaction to empathy (n = 2 genetic

counselors; n = 0 supervisors)

- “On the other side, if some patients are thinking ‘Oh, I don’t need counseling, I already know what I need to do. I don’t want to talk about my past experiences,’ they might feel perturbed and frustrated with us if we keep asking those probing questions.”
(Genetic Counselor)

- “Depending on the person, too, if you’re being too empathetic and they just get annoyed because they don’t want to talk about it, and they just want to get down to business and get it over with.”
(Genetic Counselor)

Domain 4. Emotional Outcome (n = 5 genetic counselors; n = 4 supervisors).

Some interviewees mentioned an emotional outcome that resulted from empathy use in the session. Two categories pertain to counselor and patient positive emotions (e.g., relaxation, satisfaction) and, contrary to earlier findings where genetic counselors and supervisors differentiated sympathy from empathy, here two counselors described an experience of sympathy that they feel for the patient.

Category 1. Positive emotional outcome (n = 3 genetic counselors, n = 3 supervisors)

- “If we can have that good dialogue back and forth and empathy is kind of getting through to that patient, then it’s relaxing or anxiety reducing for me and the patient, as well.”
(Genetic Counselor)
- “I guess feeling a sense of satisfaction that you’re connecting with that patient through these empathic statements and dialogue.”
(Supervisor)

Category 2. Sympathy (n = 2 genetic counselors; n = 0 supervisor).

- “Obviously, I think there is some sympathy in there. We are supposed to try to keep that separate, but I think it is human nature to also feel sympathetic for them.”
(Genetic Counselor)

Domain 5. Professionalism and Awareness of Boundaries (n = 1 genetic counselors; n = 2 supervisors). A few participants distinguished their experience of empathy in genetic counseling as involving a certain degree of professionalism as opposed to their experience of empathy in their personal life. Their responses described part of empathy as attending to their professional boundaries and maintaining an

emotional distance from the patient. Due to the straightforward nature of these responses, they were not broken down into categories.

- “The difference is you’re a counselor and do this all of the time and you do not let yourself get as emotionally involved as the patient is.”
(Genetic Counselor)
- “I am careful to not let the empathy go to a point where it’s crossing over some sort of boundary of becoming too comfortable and not maintaining that professional rapport with the patients.” (Supervisor)

Examples of Effective Empathy. Genetic counselors were asked to identify a situation in which they felt that they used empathy effectively in a session and how the patient responded to their empathy. The supervisors were asked parallel questions about their trainees’ use of empathy. Every interviewee provided a specific example and their responses were classified into four domains describing the skills employed by the genetic counselors and the effect these skills appeared to have on the patient. The domains are: (1) Genetic counselor verbal skills; (2) Genetic counselor non-verbal skills; (3) Observed patients’ non-verbal reactions; and (4) Observed patients’ verbal reactions. There are a total of seven categories across the four domains. For this section domains and categories are provided, followed by several illustrative examples that portray the domains and categories.

Domain 1. Genetic Counselor Verbal Skills (n = 10 genetic counselors; n = 9 supervisors). Many counselors and supervisors respectively described an example of their own or a student’s use of verbal empathy. There are two categories: Category 1. Validated and acknowledged emotion (n = 10 genetic counselors; n = 8 supervisors); and Category 2. Discussed cultural factors (n = 0 genetic counselors; n = 2 supervisors).

Domain 2. Genetic Counselor Nonverbal Skills (n = 7 genetic counselors; n = 9

supervisors). In this domain, several genetic counselors and most supervisors described how non-verbal skills were effective in promoting empathy in the session. There are two categories:

Category 1. Built Connection/Rapport ($n = 7$ genetic counselors; $n = 6$ supervisors); and

Category 2. Body Language was effective ($n = 1$ genetic counselors; $n = 4$ supervisors).

Domain 3. Observed Patient Nonverbal Reactions ($n = 8$ genetic counselors; $n = 8$ supervisors). Several interviewees reported that they sensed that the patient felt satisfied, appreciative or happy with the services. Others described witnessing a change in the patient's nonverbal behaviors as a result of effective empathy, including observing a body language change and, in the case of student counselors, the patient attending to the student rather than the supervisor in the room. There are three categories: Category 1. Perception that the patient felt satisfied ($n = 10$ genetic counselors; $n = 2$ supervisors); Category 2. Patient's body language changed ($n = 4$ genetic counselors; $n = 5$ supervisors); and Category 3. Patient attended to student counselor (not supervisor) ($n = 0$ genetic counselors; $n = 2$ supervisors).

Domain 4. Observed Patients' Verbal Reactions ($n = 3$ genetic counselors, $n = 9$ supervisors). Three genetic counselors and most supervisors described how the patient shared more or "opened up" as a result of the skillful use of empathy in the session. There are no separate categories.

Four examples that illustrate the four domains and seven categories are as follows:

- "As far as talking about specific situations, this [example] is really basic. This was just a regular patient coming in who had a couple of different genetic things going on in the family history, so my perinatologist wanted me to talk to them and go through their family history. Really what it was

is, the patient and her mother were there in the session, and we were going through the family history, and the patient's sister had passed away, and she was young, in her teens. She had passed away a year or two ago, and I could tell that they were both still pretty emotional about it. So I stopped my family history, I stopped and talked about her sister, and said that I could tell that they were still really emotional about it, and we just talked about her for a little bit. I know I just felt that I needed to stop what we were doing, address their emotions. They cried, which was a normal response, and I kind of normalized it for them, saying 'This is an important person in your life and you should be crying about it.' From my perspective, I was just trying to honor the memory of her sister, not just blow through the family history and keep going. I wanted to validate what they were feeling and let them express their emotions. A lot of the reason why I wanted them to express those emotions and get some of that out is so that as we carried on about all the other stuff we were going to talk about, that they would be emotionally in a place where they could then take in that information that I was going to throw at them about the prenatal stuff. I think it was good, I think it increased our relationship. I think they felt more comfortable with me; at least, that's my perception. It's difficult to know exactly. To me I felt like it made a difference, and it seemed like they were more comfortable for the rest of the session."

(Genetic Counselor)

- "This was a situation where this was the first time seeing this patient for me, but she had been evaluated previously by another specialist who had ordered genetic testing that was not the most appropriate testing to be ordered, and the patient got stuck with a pretty whopping bill for that testing. She never received any results. So she came in and was obviously and rightfully pretty angry and agitated and concerned that that was going to happen all over again here. So, really the biggest part of making that a productive session for the patient was to get past that. In order to do that, I had to come out and say, 'I can see that you're obviously angry and upset about this, and I would have been, too.' That was one of those cases where what the patient is feeling is what I'd be feeling in that situation. And saying 'Our goal here is for that not to happen to our patients that we're seeing, and I'm sorry that happened to you.' And to build that trust and rapport through using empathy about her previous situation and move on and have a session that would actually be helpful to the patient. Over the course of the session, I was able to get her to relax and calm down, and actually we were able to figure out where the testing was done and call and get the results and really kind of resolve that situation for her. It was a little bit tricky to begin with...I think that once I was able to start validating that her reaction was exactly what I expect someone to have in that situation and that I wasn't the bad person, that she was able to separate her initial experience with genetic testing with then meeting with a genetic counselor, and she was able to relax and let some of that anger

go. I think we were able to have a really good session where she felt comfortable asking a lot of questions. Once we got over that initial hump, I feel like she was able to feel better about the genetic counseling appointment.” (Genetic Counselor)

- “I had this student who, she just had the knack of talking to patients, and the patients really felt understood by her. And for her it was interesting that sometimes the things that she struggled with was when she actually had to communicate the information piece of genetic counseling. Her strength was almost in helping clients cope with information and talk about decision making. But I remember this one patient, and she was Somalian, and this particular student was also of an ethnic minority, and I remember her ability to talk about the religious and spiritual side with this particular patient. The patient had the possibility of a problem in her pregnancy, and this patient was just very much ‘It’s in God’s hands.’ And for this student, she just said, ‘This is what I think this means to you, is that right?’ And the patient just opened up about her family’s beliefs and how she needed to believe this, and if she didn’t believe this, that would necessarily mean so many other things that were foundational in her life. For this particular student, I think understanding that religious part from a personal standpoint and asking about it in a very unbiased way, as well...took the patient to a totally different level. She felt understood, she didn’t think that she was going to be pressured into doing anything else at that point, other than what she felt comfortable with, and the patient was very bonded to the student by the end of the session.

(Supervisor)

- I just had a student the other day where we’d been preparing for this particular patient coming in. She was an adult patient with cognitive disabilities and has a skin condition that’s been concerning to her. She was embarrassed by it; she just, she wants it to go away. And even from the standpoint of the counseling student, you know, the student was unsure of how she was going to approach the case as far as how do you relate to somebody who’s not necessarily developmentally or cognitively at the same level, but obviously still has their own thoughts and feelings? What I saw with the counseling student was that she physically showed that she was interested and engaged in what the patient was saying. I saw that the patient, over a series of minutes and just general getting to know one another, I saw the patient open up when she had been previously looking down at her lap, not making eye contact, and the student kind of persisted with wanting to make the patient feel as comfortable as she possibly could be, not to the point of being over-enthusiastic or over-motivated, but appropriate. What I saw from the patient was that she was able to engage the student in conversation. She [the patient] was able to open up better than she had previously. The tone of voice that I heard from the student

was not condescending, it wasn't off-putting, it was just friendly and inviting, and I think just made everybody comfortable as a whole. As a result, the patient opened up in terms of making eye contact with the student, with her caretaker. Her body positioning... previously, her hands were clasped in her lap, head was down, shoulders hunched over, but she began to stand up straighter, began to turn towards the student, become more animated in her gestures, almost like she was having a comfortable, open conversation with a friend. And the student was able to gather a lot more psychosocial information that hadn't really been previously disclosed in her medical records, circumstances of abuse with family members, her interactions with friends, and in some ways where some of the concern for the skin condition was really coming from." (Supervisor)

Example of Empathy Not Present in Session. Genetic counselors and supervisors were also asked about a situation where the genetic counselor (or the student) had difficulty being empathic. If they could not think of a specific example, genetic counselors and supervisors were asked to describe typical situations where they (or the students) have difficulty. Their responses were classified into two domains: (1) Specific example, and (2) General example and five categories. Additionally, genetic counselors or supervisors described what they or their student might have done differently in either the specific or general examples to obtain a different result from the session. These responses were classified into another four domains: (1) Use verbal skills; (2) Use nonverbal skills; (3) Prepare for the session; and (4) Miscellaneous. Across these four domains there are five categories. Domains and categories are provided, followed by several illustrative examples that portray the domains and categories.

Domain 1. Specific Example (n = 9 genetic counselors; n = 7 supervisors). Many participants described a specific example of a time when empathy was not present. These examples involve situations in which the genetic counselor/student missed opportunities to be empathic, certain patient variables made empathy difficult, and the counselor/student's own affect impacted empathy in the session. There are three

categories: Category 1. Missed Chance to be Empathic ($n = 4$ genetic counselors; $n = 4$ supervisors); Category 2. Patient Variables ($n = 6$ genetic counselors; $n = 0$ supervisors); and Category 3. Genetic Counselor Affect ($n = 1$ genetic counselor; $n = 3$ supervisors)

Domain 2. General Examples ($n = 8$ genetic counselors; $n = 5$ supervisors).

Within this domain, genetic counselors and supervisors respectively described general situations in which they or their student tend to miss opportunities to respond empathically, or genetic counselor factors behaviors and characteristics lead to reduced empathy (e.g., failure to establish rapport, counselor anxiety, difficulty being empathic because of cultural considerations). There are two categories: Category 1. Missed Opportunity to respond empathically ($n = 4$ genetic counselors; $n = 4$ supervisors); and Category 2. Genetic Counselor factors ($n = 1$ genetic counselor; $n = 1$ supervisor).

What Could Have Been Done Differently?

Domain 1. Use Verbal Skills ($n = 7$ genetic counselors; $n = 5$ supervisors).

Several genetic counselors and supervisors talked about how the use of verbal empathy skills by themselves/their student would have be beneficial in these situations. One genetic counselor also described reducing the focus on information giving. There are two categories: Category 1. Responded verbally to emotion ($n = 6$ genetic counselors; $n = 5$ supervisors); and Category 2. Not so information focused ($n = 1$ genetic counselor; $n = 0$ supervisors).

Domain 2. Use Nonverbal Skills ($n = 4$ genetic counselors; $n = 7$ supervisors). A few genetic counselors and several supervisors suggested the use of nonverbal skills, such as establishing rapport, listening more and talking less, and attending to the patient's needs, as things to do differently in session. There are three categories: Category 1.

Established rapport ($n = 2$ genetic counselors; $n = 3$ supervisors); Category 2. Listened ($n = 0$ genetic counselors; $n = 3$ supervisors); and Category 3. Attended to patient's needs ($n = 3$ genetic counselors; $n = 5$ supervisors).

Domain 3. Prepare for the Session ($n = 3$ genetic counselors; $n = 2$ supervisors).

A few interviewees described how preparation before the patient came in would have enhanced their/their student's ability to be empathic in the session. They variously suggested preparing by using role playing techniques, discussing psychosocial concerns, hiring a translator for the session, being prepared to refer to a therapist, and talking to the patient about what to expect in a genetic counseling session. There are no separate categories.

Domain 4. Miscellaneous ($n = 2$ genetic counselors; $n = 0$ supervisors). Two genetic counselors responses to difficulty with empathy could not be classified into the other domains. One individual said, "I wouldn't do anything differently." The other said, "I'm not really sure what I would have done differently. I felt like should have done something differently but I don't really know what it would have been."

Examples of situations in which empathy was not used effectively and depict what participants' believed could be done differently are provided next:

- [Regarding an experience while a student]: I was in cancer rotation and had a patient come in, and somehow I completely missed the fact that she had ADHD. I completely missed it, and it was a two-hour long session, and this woman could not stay on topic, and I had missed the fact that she had ADHD, and so I wasn't pulling her back, and I was letting her pull me off topic. And as she was getting more and more frustrated, I was getting more and more frustrated, and I couldn't figure how to fix the situation. I was missing every clue that she was throwing out. So we finally we stopped the session a little early, and really she had gathered no useful information from that session that she had come for. So I had rescheduled her for a week later, and I sat down and figured [out] what was going wrong and why I couldn't keep this woman on track. She comes in a week

later, and it was better. I had time to prepare, and I kept her on track, and then in about a half hour we went through all the information we hadn't been able to get through in two hours last time. I was just missing everything because I was so focused on, 'Am I getting all the information out to her?' What I try to do now is that I try to think, 'Okay, something's not right. Let us at least take a second step back and take a breath and figure out what's going on and maybe go in a different direction.' I was so focused on my supervisor had x, y and z she wanted me to talk to this woman about, and I had to talk about x, y and z even if it was going to kill me.
(Genetic Counselor)

- "I feel I have a hard time with empathy skills when there is an interpreter present and you're doing things through an interpreter. I think it's really difficult because it's really hard to make a connection with a patient because you have that middle person who is going back and forth. It's difficult for me to assess what the patient is feeling, and we don't have that instant communication that you typically do. A lot of times when you have an interpreter present that person is typically from a different culture, and that's also difficult because they have different ways that they do and do not express emotion, so that kind of adds to the complexity to knowing if I'm being effective at all. Also I have a hard time with individuals that don't express emotions, [are] hard to read or reluctant to share emotions with me. I just have a hard time; I'm not experienced enough yet. With those patients, you [need to have] have a bunch of different ways to reach them or make a connection with them; that's something that I hope will improve as I get more experience."

(Genetic

Counselor)

- "One student in particular that I'm thinking of, when doing a family history, found out that someone died. I think it was a mom or dad, a parent died. And she said 'Oh I'm sorry to hear that,' and it was so not heartfelt. So I said afterward, 'Okay, you didn't sound like you meant it, so I'd rather have you not say it, not say anything than have you sound false or fake.' But she said she felt like she had to say, 'Oh, I'm sorry to hear that,' and it just came out dry and robotic, and she just kept right going. I said, "Well, maybe use some eye contact, pause a little bit, because you don't want to be writing the cause of death and say 'I'm sorry to hear that.' You want to really look them in the eye because are you really sorry. I don't recall if the patient reacted negatively, but there wasn't that sense of like, 'Ah, thank you, you get it' from the patient. The patient just kind of sat there, looking tense. It wasn't like the worst thing that could have happened...but it could have positively affected it, and she didn't take that opportunity."
(Supervisor)
- So in most situations, usually what I've noticed is that it's not usually that

the student is not empathic, because like I said, I think at the basis they all are, but if anything it's their anxiety about how to deal with psychosocial situation that gets in the way. So very frequently in debriefing afterwards, they're able to say to me 'At this point this is what I noticed, but I didn't know what to do with it.' So often that's more at the beginning of the development is to notice what's going on, but they don't know what the next step is, like 'Okay how do I now handle this or what should I say or do?' Or sometimes they have a feeling of what they could say or do but they're not sure if it's the right thing, so they do nothing rather than trying it. Often what I've said is that they can do very small things. So if the issue is that you're getting a sense of where this is going and it's creating some anxiety for you because you're unsure of what you should say next is often the student then turns to the medical knowledge or starts to talk faster or starts to fill the space. And so one of the things I've talked about is you can certainly take a pause at that point and you can take like a real pause. You can do some paraphrasing to give yourself time to think what can I do next, but at the same time in paraphrasing the patient is getting a sense of, 'Yes this person really does understand me.' Or if the student is not paraphrasing appropriately, that's an occasion for the patient to say 'Actually that's not quite what I meant' or 'No, that's not what I mean,' in which case that can also help the student at that point to say, 'Oh then maybe I'm getting the wrong message here.' (Supervisor)

Research Question 3: How is genetic counselors' empathy development

fostered in graduate training programs? Genetic counselors ($n=16$) were asked their perceptions of how their genetic counselor training program influenced their empathy development, including specific methods used to foster empathy. There are four domains: (1) Genetic counselor coursework; (2) Building on innate empathy; (3) Learned more through experience, not didactic courses; and (4) Unhelpful methods. There are a total of six categories across the four domains.

Domain 1. Genetic Counseling Coursework ($n = 16$ genetic counselors). Every counselor described methods used in their program to help foster empathy. Six categories describe these methods.

Category 1. Discussing cases/talking about empathy ($n = 10$ genetic counselors)

- “...there was a lot of discussing cases with your classmates and the professor. I think the combination of having time to talk with each other and work through different definitions and different ways of handling it was really helpful.”
(Genetic Counselor)

Category 2. Psychosocial skills class (n = 8 genetic counselors)

- “One of the main classes that I remember where we were learned about empathy was with a social worker who talked about her patients’ reactions and the patients’ feelings, and she gave examples of people she had seen in her practice...I thought it was really helpful.”
(Genetic Counselor)

Category 3. Role playing (n = 7 genetic counselors)

- “You do a lot of role playing as a genetic counselor and it was great. I really liked that.”
(Genetic Counselor)

Category 4. Reading (n = 3 genetic counselors)

- “We were asked to read many papers and book sections on empathy...I believe those methods were helpful in pushing me to think deeper and more clinically about use of empathy in genetic counseling.”
(Genetic Counselor)

Category 5. Writing exercises (n = 3 genetic counselors)

- “We read a book on how to give bad news, and in that there was this exercise where they would give you a patient response and you had to come up with four different types of responses to that patient...I found that exercise very helpful.”
(Genetic Counselor)

Category 6. Reviewing tapes of role plays and sessions (n = 2 genetic counselors)

- “We videotaped ourselves in a mock session and, reviewing that with others, that was helpful.”
(Genetic Counselors)

Domain 2. Building on Innate Empathy (n = 6 genetic counselors). A few genetic counselors mentioned the presence of empathy even prior to their genetic counselor

training program. They described empathy as an innate quality. There are no separate categories.

- “I think that everyone that goes into these programs has sort of an innate sense of what empathy is and how to use it. But what my genetic counselor training did was let me identify the different levels of empathy and tools to use empathy and also the importance of empathy in the genetic counseling process...I don’t know if I could pinpoint specific methods that helped me.” (Genetic Counselor)

Domain 3. Learned more through experience, not didactic courses (n = 3 genetic counselors). Three genetic counselors spoke of clinical rotations as being more influential in their development of empathy, although they acknowledged some benefit to empathy coursework. Responses were not further placed into categories.

- “I think the best thing the programs do first is to talk about it and make sure you are aware of it. The best practice that I got with training was with the clinical rotations. You’re actually experiencing real people and real situations and real emotions and you can explore that.” (Genetic Counselor)

Domain 4. Methods that were not helpful (n = 7 genetic counselors). Several genetic counselors described methods that were not helpful in fostering empathy. Not all genetic counselors were able to come up with a response to this question. The following categories describe the responses of four genetic counselors who did describe unhelpful methods.

Category 1. Role plays were not helpful (n = 3 genetic counselors)

- “For me, role plays were always kind of cheesy beaus it was not real and I always had a hard time with those. Those are not real people and those are not real emotions and it’s hard to get involved when you know it’s all fake.” (Genetic Counselor)

Category 2. Written exercise were not helpful (n = 2 genetic counselors)

- “The written exercises I found were a little bit less helpful. You know, this is the situation, now write a primary empathy statement, now write an advanced empathy statement...it felt a little fake.”
(Genetic Counselor)

Category 3. Psychosocial skills course not helpful (n = 1 genetic counselor)

- “In terms of what was not helpful, interestingly, was a counseling skills course. It wasn’t that it was detrimental, but I just didn’t find it particularly helpful.”
(Genetic Counselor)

Category 4. Readings not helpful (n = 1 genetic counselor)

- “Just dryly reading about [empathy] is not as helpful, at least to me, as talking about it and acting it out and working on it live in real life.”
(Genetic Counselor)

Research Question 4: What specific methods do genetic counselors perceive their supervisors used to develop their empathy? What specific methods do supervisors report using to develop empathy? All of the participants were asked to describe the methods used to foster student empathy development as part of clinical supervision. Their responses yielded four domains: (1) Reflection; (2) Anticipatory guidance; (3) Supervisor prioritizes empathy; and (4) Observation. There are a total of five categories.

Domain 1. Reflection (n = 13 genetic counselors; n = 7 supervisors). Many of the participants mentioned the use of self-reflection or debriefing to enhance empathy development. Two categories emerged from their responses.

Category 1. Verbal post-session reflection (n = 12 genetic counselors; n = 6 supervisors)

- “The supervisors will debrief you. So you’ll talk about that patient and what they might have been feeling, and sometimes just because the supervisors have more experience, they would pick out some of the issues that you might not think about as a student. And that is a big role that the supervisors have is to identify those after you’ve seen a patient.”

(Genetic Counselor)

- “I do a lot of reflection afterwards and ‘What did you say?’ and ‘What do you think you could have said better?’ and ‘Did you think that helped the session?’ and ‘Did you really feel the patient’s emotions?’ So we do a lot of reflection.”
(Supervisor)

Category 2. Writing about empathy/emotion (n = 2 genetic counselors; n = 2 supervisor)

- “As part of a prenatal assignment, we had to do a journal entry and then turn that in, and I did that about how difficult it was to have empathy for a certain patient.”
(Genetic Counselor)
- “I’ve given students a list of questions before they even start their rotation to think about and answer on their own, just to get the student thinking about what emotional issues might be more difficult for them to deal with during the session, [to] make them be more introspective.”
(Supervisor)

Domain 2. Anticipatory guidance (n = 6 genetic counselors; n = 9 supervisors).

A few genetic counselors and most of the supervisors described preparation before genetic counseling sessions as a skill to equip genetic counseling students for psychosocial aspects of a case. Three categories concern the different methods of methods of anticipatory guidance described by participants.

Category 1. Prep for psychosocial opportunities (n = 4 genetic counselors; n = 8 supervisors)

- “A lot of empathy training came from case prep...you know, different supervisors [would say], ‘Think for your own in advance before you see this patient how they’re going to be feeling about these results’ or talking about ‘How do you think they will be feeling coming into this session?’”
(Genetic Counselor)

- “I have students do an outline of their cases, preparing the medical information, and along with that, I’ve asked that students think of...at least five psychosocial issues that may come up.”
(Supervisor)

Category 2. Role Plays (n = 2 genetic counselors; n = 5 supervisors)

- “I think that the big thing was that they would practice the session with us and go over the information with us.”
(Genetic Counselor)
- “Role playing I do a lot with the students especially at that start of the session where I think empathy is so important. Otherwise, the whole session can just not be as productive as possible so I do a lot of role playing with students starting sessions.
(Supervisor)

Category 3. Assigned readings (n = 0 genetic counselors; n = 2 supervisors)

- “If there’s a lack of either understanding, or the training up to that point hasn’t done it, then certainly providing the Kessler articles or the John Weil book. There are some chapters out of there that I think helped students.” (Supervisor)

Domain 3. Supervisor requires empathy (n = 6 genetic counselors, n = 0

supervisors). Several genetic counselors spoke to the variability in emphasis placed on empathy by their clinical supervisors. They noticed that some supervisors made empathy a focus of clinical supervision, while others were less likely to discuss empathy or psychosocial skills. No supervisors spoke to this effect. Possibly due to the way the question was asked, supervisors weren’t like to endorse that empathy was not a priority for them. There are no separate categories.

- “We all have our own style, some of us are more on the educational side and some of us are more on the psychosocial side. Supervisors that were like me and were a little bit more on the educational side, some of them maybe forgot or didn’t put as much emphasis on trying to incorporate empathy into the session. But the ones who were more on the psychosocial counseling side definitely dragged that out of me and said, “Even if you just ask a few questions or have a few reflective statements, you have to incorporate that in somewhere.”

(Genetic Counselor)

Domain 4. Observation (n = 2 genetic counselors; n = 6 supervisors). A few interviewees mentioned observation of the supervisor as a method for fostering empathy. This type of observation appears to promote vicarious learning. There are no separate categories.

- “In situations where you’re not the acting genetic counselor in the room, you have an amazing window into the connection between the counselor and the patient. That’s the biggest role a supervisor plays...I think the observational experience of students is more valuable than the feedback they get as the acting genetic counselor.”
(Genetic Counselor)
- “The way we try to foster that development is to have the student during those first few weeks really observe the supervisor in the session because usually we are tag-teaming during those first few weeks, and they are observing the supervisor employing empathy and using that skill during the session.”
(Supervisor)

Research Question 5: How do supervisors assess empathy development in genetic counseling students? Supervisors only ($n = 11$) were asked to describe how they assess empathy development in their students. They were asked questions about evaluating students with respect to all three components of the Barrett-Lennard model, including: 1) How do you evaluate your students’ ability to experience empathy?; 2) To express empathy?; and 3) How do you determine whether the patient is receiving the students empathy? Supervisors were further asked to describe how they can tell when a student is developing empathy, as opposed to a student who is not, and what they do to foster empathy when a student is having difficulty developing empathy skills.

Evaluation of Genetic Counselors’ Ability to Experience Empathy. Supervisors’ reports of how they whether or not a student is experiencing empathy, yielded three domains that include observing the student’s ability to build rapport, to practice empathy

statements, to use empathic body language, observing the patient's reaction, and reflection after sessions. Due to the straightforward nature of these responses, there are no separate categories.

Domain 1. Observe genetic counselor verbal and nonverbal language in session

(n = 8 supervisors)

- “Typically what I’ll [do] is observe the student in a session counseling a patient, and I can assess not only what they’re saying but also their facial expressions and body language.”
(Supervisor)
- “For me it is easier to evaluate how a student is expressing empathy rather than evaluating if they’re actually experiencing it themselves. Typically, what I do when I’m supervising is observe them in session and assessing what they’re saying, not just their statements but also their facial expressions and body language.” (Supervisor)

Domain 2. Observe patient reaction (n = 5 supervisors)

- “I mostly look at how the patient responds. If the patient responds in a way that you can tell that they are feeling heard and that their needs are being addressed, then the student’s probably doing a good job.”
(Supervisor)

Domain 3. Reflection (n = 4 supervisors)

- “I debrief for each of the cases with the student to get a sense of what they felt was going on beyond just the ‘The patient didn’t seem to understand genes and chromosomes or my explanation.’ Get a sense of what the student felt and give them an opportunity to at least share with them what I observed happening.”
(Supervisor)

Evaluation of Genetic Counselors’ Expression of Empathy. All of the supervisors reported using direct observation of the session to determine whether or not students could express empathy. Two domains, with no separate categories, describe what they attend to doing these observations.

Domain 1. Observe genetic counselor reaction (n = 9 supervisors)

- “To evaluate their expression of empathy, you’re in the session watching the student’s body position, tone, that kind of thing.”
(Supervisor)

Domain 2. Observe patient reaction (n = 6 supervisors)

- “Seeing what’s happening in the room and how the patient responds...relaxing and a release and opening up more.”
(Supervisor)

Evaluation of Patients’ Receipt of Empathy. All of the supervisors mentioned looking to the patient’s verbal and nonverbal reaction to determine whether or not the patient is receiving the genetic counseling student’s empathy. One supervisor also reported using a patient feedback form to evaluate empathy. Three domains pertain to the types of patient behaviors to which they attend.

Domain 1. Observe patient nonverbal response (n = 10 supervisors)

- “I think a really basic thing is if I am just like a voyeur in the room, and the patient is not even looking at me as the supervisor. And if I can sense that they’re just making really good eye contact, and you can see in body language that the patient is really in tune with the student.”
(Supervisor)

Domain 2. Observe patient verbal response (n = 4 supervisors)

- “An openness, maybe talking more about that particular subject that may otherwise have been taboo or off-subject. If the patient is like ‘Wow, this genetic counselor is looking to hear more about this or understands my feelings,’ then she may be more open.”
(Supervisor)

Domain 3. Patient feedback form (n = 1 supervisor). One supervisor reported using a feedback form to determine whether the patient is receiving the counselor’s empathy.

- “One way is the client’s feedback on that evaluation [form].”

Evaluation of Empathy Development. All eleven supervisors described the types

of data that indicates to them that a student is developing empathy skills as opposed to those students who are not developing empathy skills. Two domains, respectively, describe what they observe when genetic counseling students are developing empathy skills, and what the supervisors do when genetic counseling students are not developing empathy skills: (1) Developing skills; and (2) Difficulty developing skills. There are a total of five categories.

Domain 1. Developing Skills (n = 11 supervisors). Every supervisor reported observing in-session behaviors that correspond to empathy skills, and several mentioned witnessing students' insight when debriefing following sessions as evidence of their empathy skill development. Two categories reflect their responses.

Category 1. Observe student's in-session skills (n = 11 supervisors)

- "I think it's different at different stages. You're starting with an ability to use primary empathy and then basic reflection. Then an ability to assess or feel something more even if they don't say it. An ability to express that more advanced empathy. You are seeing that trajectory happening, but knowing it is not always linear."
(Supervisor)

Category 2. Observe student's reflection following sessions (n = 3 supervisors)

- "When you do debrief, asking students 'What do you think was going on?' and they are able to say 'Well, these are the things I observed in the patient,' or 'This is what they said, and that's why I responded that way.' It's just a higher level of them... trying to understand what the patient was saying."
(Supervisor)

Domain 2. Difficulty Developing Skills (n = 11 supervisors). This domain reflects supervisors' actions to help students who are having difficulty developing empathy skills. Three categories concern their behaviors.

Category 1. Explicitly teach skills and talk about empathy (n = 10

supervisors)

- “Teaching them to make it a habit. Especially primary empathy, even that basic interaction, and working their way up to the more advanced empathy.”

(Supervisor)

Category 2. Help students prepare for sessions (n = 5 supervisors)

- “In those situations, we use role playing to help develop skills. We also use preparation before hand to talk about the theoretical emotional issues that may be weighing on the patient.”

(Supervisor)

Category 3. Provide feedback on sessions (n = 4 supervisors)

- “Talk about ‘Why didn’t you go there?’ ‘What made you nervous about it?’ I had one student who would not go further in any conversations about cancer, and then we talked about it, and I realized she had some pretty traumatic cancer diagnoses in her own family. So it was her own fear blocking her. We talked about methods to use to try to overcome that, and we talked more about her own experience so that she’d be more free to experience it with a patient.” (Supervisor)

Chapter 5: Discussion

Empathy is known to have healing effects (Hojat, Louis, Markham, Wender, & Rabinowitz, 2011; Marci & Riess, 2005) and is effective in helping patients feel satisfied with services (Hickson et al., 2002), leading to improved outcomes. Although methods for teaching empathy have been discussed in medical and mental health settings, it is unknown what specific methods are being used to foster empathy development in genetic counselors. Therefore, the present study sought to investigate how genetic counselors and genetic counseling supervisors define empathy and describe its use in the genetic counseling setting. Further, this study identified how genetic counselors report learning empathy in their training programs and in clinical supervision and compared these responses with clinical supervisors' reports of their methods for fostering empathy in students.

Recently graduated genetic counselors that subscribed to the National Society of Genetic Counselors (NSGC) online listserv and genetic counseling supervisors who were nominated by program directors were invited to participate in an online survey. Seventy-seven individuals completed surveys, and their empathy definitions were analyzed using interpretive content analysis. Twenty-seven individuals ($n = 16$ genetic counselors; $n = 11$ supervisors) completed follow up interviews asking further questions broadly about empathy, empathy use in genetic counseling, and teaching methods for empathy. Supervisors were also asked about evaluating students' empathy. In the following sections, major results are discussed, organized by research question (with survey results reported first, followed by interview results), study limitations are outlined, and practice implications and research recommendations are delineated

Survey Results: Genetic Counselors Definitions of Empathy in Genetic Counseling

Findings from the study showed that the survey respondents' definitions of empathy correspond with the three components of Barrett-Lennard's (1981) Model of Empathy. Genetic counselors almost unanimously described empathy as a process of being in tune with their patients and understanding their needs (the first component of the Barrett-Lennard Model). More than half indicated that empathy is also "something more." Specifically, they described empathy as a process of conveying that understanding to the patient through verbal or non-verbal communication, a description that corresponds with the second component of the Barrett-Lennard Model. Less commonly, genetic counselors reported the patient's perception of empathy as a part of the empathic process (the third component of the Barrett-Lennard Model).

These survey results are consistent with findings from other studies which indicate genetic counselors may be most inclined to describe empathy as the first component of Barrett-Lennard's Model. For example, Kao and colleagues (2010) studied genetic counselors' self-reported empathy experience and expression and found the counselors tended to rate highest in the area of perspective taking, or the ability to put themselves in another's shoes, and in the area of empathic concern, or their capacity to experience the emotions of others in distress. Benoit, Veach and Leroy (2007) also found that genetic counselors have the capacity to experience their patients' emotions, and for some it is difficult to detach themselves from the patient's experience, leading to compassion fatigue.

The findings also reflect similarities to Kessler's (1999) conceptual model of genetic counselor empathy, as the definitions provided by participants primarily

emphasized Components 1 and 2 of the Barrett-Lennard model. Though some respondents stated the patient's perception of feeling understood and accepted is an essential part of empathy, this third component generally was less evident in the sample's empathy definitions.

Genetic Counselors' and Supervisors' Understanding of Empathy

Genetic counselor interviewees reported their definitions of empathy were typically learned through graduate training, with most reporting their training provided them with a conceptual understanding of empathy. Some also noted that prior to training, empathy was a quality that "came naturally" to them, describing an instinctual facet to empathy. Of those who reported that empathy is instinctual, some noted their genetic counseling training helped them tap into their innate empathy ability. These findings support Brothers' (1989) assertion that empathy may be present at birth but can be elaborated upon through socialization (in this case, socialization into empathy in genetic counseling).

Genetic counselors attributed changes in their definition to readings and professional experience. They also reported their definition had qualitatively changed during training as they began to see empathy as a process beyond emotion recognition; they recognized overt behaviors associated with empathy, such as verbal and nonverbal communication. These interviewees further reported that their definition had become tailored toward genetic counseling. Further, several counselors defined empathy in contrast with sympathy, a distinction they were unaware of before entering genetic counselor training. Finally, some genetic counselors perceived empathy as a tangible skill that they understood how to use through education in their graduate program.

Conversely, the supervisor interviewees perceived graduate training and professional experience as equally influential in their definitions of empathy, perhaps due to their increased clinical experience. By design the supervisors had more clinical/professional experience than the genetic counselor participants. Compared to the genetic counselors, who all reported a change in their definition of empathy since starting training, only slightly more than half of the supervisors indicated their definition had changed since beginning training. Every supervisor who noted no change, did however, say their understanding of what their definition *means* had broadened. Similar to the genetic counselors, those supervisors who reported a change to their definition now perceived empathy as a process going beyond emotion recognition

Despite these differences between genetic counselors and supervisors, many participants in each group perceived themselves as having a good understanding of empathy in genetic counseling. Many also indicated they were still learning what empathy is in genetic counseling. More genetic counselors than supervisors mentioned they were still learning. This finding is not surprising, since the supervisors, who have accrued more genetic counseling experience, may be "ahead" of some of the genetic counselors with respect to their professional development where empathy is concerned. These findings are reminiscent of Runyon and colleagues (Runyon, Zahm, McCarthy Veach, MacFarlane, & LeRoy, 2008), who noted that psychosocial skill development (including empathy) continues "on the job." Another possibility is that providing supervision helps supervisors develop more highly refined and consistent perspectives on empathy as they provide students with the necessary support and guidance in their skill development.

The results of responses to parallel questions about empathy development suggest clinical experience was the most influential factor in how genetic counselors use empathy and how supervisors teach empathy. Genetic counselors and supervisors reported that as their understanding of empathy has changed, their use of empathy has evolved, while supervisors also reported that as their understanding changed, they have adapted their teaching methods. For the genetic counselors, empathy has become a tangible concept they feel more comfortable and confident using in session. Though not stated directly, it is likely this comfort has also increased the frequency with which they use empathy in a session. Indeed, Runyon and colleagues (2010) found that as genetic counselors gain experience, they become more appreciative of the role of empathy in their sessions. The supervisor participants described themselves as more likely to focus on psychosocial aspects of a case and to strongly encourage students to seek out opportunities to be empathic in session. Some supervisors also mentioned they had begun creating developmentally-appropriate challenges for students and breaking empathy into tangible steps. These two strategies may result from a clearer understanding of the role of empathy in genetic counseling that appears to come with experience.

As previously stated, most participants described themselves as always learning about empathy. Nonetheless, they were able to describe when they finally “got” what empathy is all about in genetic counseling. For genetic counselors, the most frequent attribution of empathy understanding came from training programs. Supervisors reported that students come with varying levels of empathic ability, describing empathy understanding and skill as very “student-dependent.” They noted that some students have empathy skills that need fine-tuning, while others never get what empathy is about while

on their rotations. They also seemed optimistic that students would continue to develop their empathy skills through experiences beyond training, noting that empathy development takes time. This further speaks to empathy as an evolving process, as was noted by many participants. These findings are similar to reports in the medical and mental health literatures, noting that some students appear to be more inclined and attuned to empathy (e.g., Lesh, 1970; Spiro, 1992), while also finding that empathy is an evolving and developing process that can be fostered through training (e.g. Vivino, Thompson, Hill, & Ladany, 2009; Riess, Kelly, Bailey, Dunn, & Phillips, 2012).

Descriptions of What Empathy Looks Like in Genetic Counseling Sessions

The interview participants' descriptions of what empathy looks like in genetic counselor empathy indicate that it is a multi-faceted construct. Similar to the definitions of empathy provided by the total sample of survey respondents, genetic counselors and supervisors were cognizant of three aspects of empathy corresponding to Barrett-Lennard's Three Component Model. Nearly every interviewee reported that empathy involves some form of empathic expression (Component 2). They described what the counselor does as the hallmark feature of empathy, including empathy statements, body language, using silence, and asking relevant questions. Genetic counselors and supervisors also described a process of empathic engagement (Component 1), noting that empathy involves skills that enhance the relationship between the genetic counselor and the patient, including listening and attending, taking the patient's perspective, and understanding the patient. Despite being infrequently mentioned in their definitions, when prompted, genetic counselors and supervisors were able to describe the patient's

receipt of empathy as feeling understood, safe and supported, and believing that the genetic counselor would be helpful to them (Component 3).

Some genetic counselors spoke of the role and effect that empathy can have on a session, departing from a definition of empathy, per se. For example, some genetic counselors described negative reactions that patient's can have in response to empathy when they do not want to discuss emotions with the genetic counselor. Others described empathy as an awareness of their own affective condition, including experiencing a positive feeling when they were empathically connecting with the patient or having sympathy for the patient. For a few genetic counselors and supervisors, empathy was described as having a professional component. They described an awareness of their professional boundaries and how this makes empathy in session different from empathy with family or friends.

These findings are consistent with definitions of empathy found in the medical and mental health literatures. Within these two professions, empathy has been defined as involving both affective and cognitive processes to enhance the relationship with the patient while also maintaining a boundary that allows the practitioner to detach from the patient's experience (e.g., Halpern, 2003; Rogers, 1959). No definition of empathy has been universally accepted for genetic counseling. The present findings, therefore, support a definition of empathy in genetic counseling that focuses on the *purpose* of empathy as a means to engage with the patient, while using verbal and nonverbal means to *express understanding* to the patient and checking in with the patient regarding their *receipt of that empathy*. The definition would also include a component of professionalism, whereby genetic counselors maintain professional boundaries.

When asked about situations in which their empathy was effective, both genetic counselors and supervisors variously described incidences where the counselor used verbal and nonverbal skills to validate patient emotions, discuss cultural factors, and use body language that showed the patient they were listening. Patients reacted to the empathy by experiencing a mirrored body language and by attending to the counselor (rather than the supervisor in the room). Participants also expressed their perceptions that the patient felt satisfied, helped, or understood. Some mentioned patients also verbally expressed feeling understood and/or agreed with the genetic counselor's assessment of their emotional experience. Interestingly, these examples of effective empathy are reminiscent of some genetic counselors' "Defining Moments," where they described personal or professional experiences that impacted their genetic counseling practice. In these defining moments, the genetic counselors described experiences that enhanced their ability to relate with patients (e.g., Glessner, 2012; Gordon, 2012) or they talked about times they were effectively in tune with patients, which included disregarding their professional agenda or putting aside personal biases (Chin, 2012; Mathieson, 2012).

When asked about situations in which empathy was not present in the session, both genetic counselors and supervisors respectively gave specific examples of times when they or the student counselor missed an opportunity to be empathic. Missed opportunities included times when the counselor felt uncertain of what to say or do or missed an opportunity to use an empathic gesture. Genetic counselor participants also described patient variables that made it difficult for them to be empathic with their patient, such as the patient coming to the session angry or making a decision that differed from what the genetic counselor may have done. Notably, supervisors did not report

patient variables as a reason for missed empathy in sessions. Perhaps the student counselors are disclosing to supervisors specific variables that make empathy more difficult for them with these patients. Alternatively, the “missed” opportunities witnessed by the supervisor may have resulted from interpersonal factors playing out between the genetic counselor and the patient that the supervisor was unaware of; for instance, genetic counselors may have had difficulty empathizing due to particular patient variables (e.g. an angry patient or a patient’s decision-making that was different from their own) that they did not report to their supervisor resulting in the supervisor perceiving a missed opportunity while the genetic counselor was aware of a reason behind the empathy void. A less commonly reported reason for the lack of empathy concerned genetic counselor/student characteristics, such as attempts to be empathic that were not genuine.

Genetic counselors and supervisors described several things they/the student could have done differently to increase empathy in those “missed opportunity” situations. They suggested using verbal expression to show the patient they are perceiving their emotional experience, deviating from an information-focused session, using nonverbal skills to foster a connection with the patient, listening to the patient, and attending to the patient’s needs. They also mentioned preparation prior to the session (i.e., anticipatory guidance). Finally, some genetic counselors were unaware of what they could do differently; this result may suggest that some genetic counselors have a true skill deficit, and although they may wish to be more empathic, they are not exactly sure how to do this in a session. This hypothesis is supported by Borders and colleagues (2006) who surmised that some genetic counselors hesitate to use psychosocial skills for a variety of reasons such as discomfort with emotional contact, fear of prying into the patient’s

privacy, worry about their own emotional response, or lack of skill in handling these situations.

While some genetic counselors pointed to discrete microskills that were used, such as a primary empathy statement or use of body language, others described how their empathy was not a distinct moment in a session but rather a process that is fostered throughout a session. These genetic counselors seem to understand that empathy is not an intermittent part of a session that is explored “if there is time” or only “if all of the genetic information is delivered;” instead it is an important element that allows the patient to feel heard, and to more openly explore the medical reasons for their visit.

The present findings suggest that genetic counselors and supervisors are able to identify what genetic counselor empathy looks like and how genetic counselors use it effectively in session. Equally important, they are able to describe times when genetic counselors are not empathic, the factors that contribute to a lack of empathy, and strategies for remedying these situations.

Training Programs’ Methods for Fostering Empathy

The genetic counselor participants described a variety of ways in which they believed their graduate training program fostered their empathy. Most pointed to coursework that enhanced their learning of empathy. Helpful activities within these courses included discussion about the concept of empathy, role playing, reviewing tapes of genetic counseling sessions, readings, and completing written exercises. These methods for fostering empathy are similar to those used in medical and mental health fields. Studies suggest medical and mental health student develop empathy skills through lecture and discussion, role plays, reflective writing, and reading literature (e.g., DasGupta &

Charon, 2004; Fernald, 1995; Gannt Billingsly, & Giordano; 1980; Nerdrum, 1997; Shapiro, Morrison, & Boker, 2006; Shapiro, Rucker, & Robitshek, 2006; Winefield & Chur-Hansen, 2000). Some of the counselors also expressed their belief that empathy is largely innate, while others reported that clinical experience, not didactic coursework, was most helpful in learning empathy. These results are consistent with theoretical perspectives that empathy is an innate quality that can be refined or built upon through experience (e.g. Brothers, 1989; Gladstein, 1983).

Close to half of the genetic counselors identified methods they perceived as unhelpful in fostering their empathy. These methods overlap with those identified as helpful, including role plays, written exercises, a psychosocial skills course, and readings. These findings suggest fostering empathy can be quite a variable experience, and no one universal teaching method is equally effective with all students. Moreover, this investigator contends that supervisor and course instructors' empathy and teaching skills play a major role in the effectiveness of these methods.

Supervisor Methods for Fostering Empathy

Genetic counselors and supervisors were fairly congruent in their report of methods used to foster student empathy. For both groups, post-session reflection and anticipatory guidance were the most commonly identified methods. Post-session reflection involved both discussion of the session with the supervisor and writing about one's empathic experience with the patient. Some studies have described the importance of genetic counselor self-reflection on empathic growth (e.g. , Runyon et al., 2010; Zahm, McCarthy Veach, & LeRoy, 2008). The present results suggest supervisors use techniques that encourage self-reflection, although additional research is needed to

confirm this hypothesis. Anticipatory guidance also is used by supervisors to prepare genetic counseling students for psychosocial aspects that may arise in a session. For instance, genetic counselor and supervisor participants described talking about the emotions a patient might experience, using role plays to prepare for the session, and assigning readings pertinent to the psychosocial aspects of a case. Also, both genetic counselors and supervisors identified observation of the supervisor in the counseling role as another method for promoting empathy development. Specifically, the student could witness how empathy can be used with a patient and hopefully emulate that behavior in later sessions. Finally, the genetic counselors were acutely aware of differences among supervisors with regards to a focus on empathy development, noting that some supervisors made it a priority, while others did not do so.

Borders, Eubanks, and Callanan's (2006) paper on supervision strategies for genetic counseling student development of psychosocial skills outlines several skill enhancing interventions that are reflected in the present results. For instance, Borders et al. describe modeling, where the student observes the supervisor, role playing, and a "thinking aloud" approach, that is, discussing the student's internal processing and preparing for emotional aspects of the session. Based on both genetic counselor and supervisor participants' reports, it appears these methods are being implemented in clinical rotations across training programs. Other methods outlined by Borders and colleagues (2006), particularly preventive approaches that normalize anxiety and help students develop goals for building their psychosocial skills, were not identified in the present study. Perhaps these latter methods are not as relevant to empathy development. More likely, however, is that the small number of participants (common to qualitative

research) resulted in a less comprehensive report of interventions. Research with larger samples should be done to assess methods for empathy development.

Supervisors' Evaluation of Empathy

The supervisor participants reported using live supervision as a primary means to evaluate all three components of the Barrett-Lennard Model. While observing a session, they watch both the genetic counselor and the patient to determine if the genetic counseling student is experiencing the client's emotions and if they are expressing empathy to the patient. Specifically, the supervisors reported observing the patient's verbal and non-verbal expression to see if the patient feels heard. They also reported that reflection after a session can help them determine whether a student is "in tune" with the patient's emotions and thus, post-session debriefing provides an additional means of evaluating a trainee. Finally, one supervisor reported using a patient feedback form to determine if the empathy was being received.

When asked to more broadly describe how they assess whether a genetic counseling student is developing empathy skills as opposed to someone who is not, supervisors similarly reported that live supervision and post-session reflection provided the best opportunities to make this assessment. The methods they used for remediation of students who are not developing empathy include initiating explicit discussions about empathy skills, preparing students for sessions by highlighting how empathy might be used, and providing feedback after sessions.

Study Strengths and Study Limitations

There are several strengths to the present study. This study provided an in depth look at a topic that has not been studied in genetic counseling. The use of qualitative

interviews allowed genetic counselors and supervisors to be detailed in their descriptions of empathy and the methods used to foster it. Additionally, the use of two groups of participants, genetic counselors and supervisors, gave two differing perspectives for how empathy can be developed as part of genetic counselor training.

There were also limitations in the present study. First, the sample size was fairly small for the genetic counselors, compared to the number of full members subscribing to the NSGC listserv ($\sim N=1200$). Second, the supervisors and genetic counselors who agreed to be interviewed may not be representative of the population. For instance, individuals who self-select to be interviewed may be more inclined to prioritize empathy in their sessions or in their supervision. Third, while the study found that supervisors and genetic counselors represented a national sample, participants were not asked where they completed their training. Therefore it is unknown whether the sample represents all American Board of Genetic Counseling (ABGC) certified genetic counseling programs.

A fourth limitation to the study is that genetic counselors were selected based on proximity to graduation (within the past four years). This criterion was chosen to ensure that participants could recall their training experiences; however, it may take more than a couple of years for genetic counselors to develop the “big picture” of empathy. Indeed, Runyon and colleagues (2010) have found that empathy continues to develop long into one’s professional career. Therefore, the findings may have been different if the sample of genetic counselors included individuals who had been graduated for a longer period of time. Fifth, the genetic counselors and supervisors received the interview questions in advance, allowing them to be thoughtful in their responses. Not every participant may have reviewed the questions, and those who did may have lacked spontaneity in their

responses. A sixth limitation is that four of the genetic counselor interviewees reported having supervisory experience. It is impossible to discern the extent to which these genetic counselors' responses are due to their experience as counselors versus their experience as supervisors, whereas for the other 12, their responses likely were based predominantly on their experience as counselors. Thus the mixed roles represented in the genetic counseling sample may have altered their responses in salient ways.

Additional limitations concern possible thematic differences in responses between the genetic counselors and the supervisors. Differences may be due to the genetic counselors being less experienced than the supervisors; the fact that the genetic counselors were expressing their perceptions based on an “*n* of 1” (that is, themselves) whereas supervisors were responding based on multiple supervision experiences; and it may be difficult for the genetic counselors to identify personal characteristics that limit their empathic ability. Reliance on self-report precludes any assessment of the validity of their responses and/or their level of empathy skills. Additionally, findings yielded very few “general” categories in cross analysis and there were no general categories found within the genetic counseling group. This may have been the result of slicing the data too thinly into distinct domains in the data analysis or it could have resulted from novice counselors varying in their precise understanding of empathy. Though qualitative data by their nature are not intended to be generalized to the population of interest, this finding supports that further research is necessary to prove representativeness to the population.

Practice and Training Implications

Defining empathy. This study provides empirical evidence regarding the definition of empathy specific to genetic counseling. The participants defined empathy in

ways that are similar to other health professions. Similar to other health professionals, the genetic counselors and supervisors collectively described all three components of the Barrett-Lennard Model (1981) and also similarly placed particular emphasis on Components 1 and 2. The results further indicate that while empathy seems most visible and apparent when genetic counselors are engaged in empathic expression with a patient (indeed, these behaviors were the most frequently described aspect of empathy), empathic engagement underlies all that genetic counselors do with a patient, even before a patient arrives when reviewing the medical record (alone or with a supervisor, in the case of students) and preparing for psychosocial aspects of the case. Less frequently, genetic counselors and supervisors reported the patient's receipt of empathy was a critical part of the empathic process. However, if a patient is to have any satisfaction with a session, this component is perhaps the most important. Typically, genetic counselors or supervisors evaluated this aspect by observing the patient's reaction. A few genetic counselors and supervisors described additional methods, such as the patient feedback form, which could provide another way that patient's can inform practitioners if their empathy is being received.

Genetic counselors and supervisors also described empathy in ways that are tailored to unique aspects of their profession, such as the provision of genetic information and promotion of patient decision-making. McCarthy Veach and colleagues' (McCarthy Veach et al., 2007) Reciprocal Engagement Model (REM) (see Figure 2) illustrates five basic tenets of genetic counseling practice that include educating the patient regarding genetic information and recognizing the importance of patients' individual attributes, including their emotions, autonomy, and resiliency. The REM also articulates genetic

counseling outcomes that includes the patient's ability to understand and apply the information they receive. All of these tenets work together to produce desired outcomes within the context of a healing relationship. The authors emphasize the centrality of empathy to the development of the genetic counselor-patient relationships.

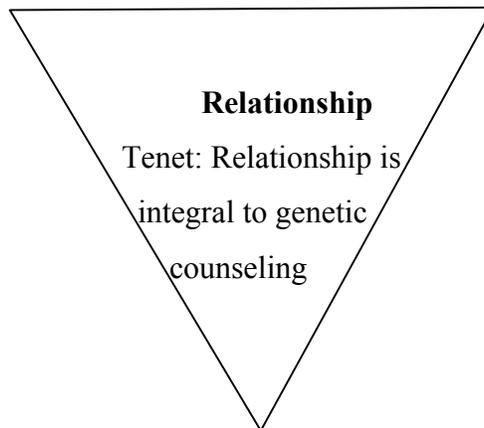
Figure 2. Reciprocal Engagement Model (REM) of the Genetic Counseling Process¹

Education

Tenet: Genetic information is key

Individual Attributes

Tenet: Patient autonomy is supported
Patients are resilient
Patient emotions matter



Genetic Counseling Outcomes

Patient understands and applies information to

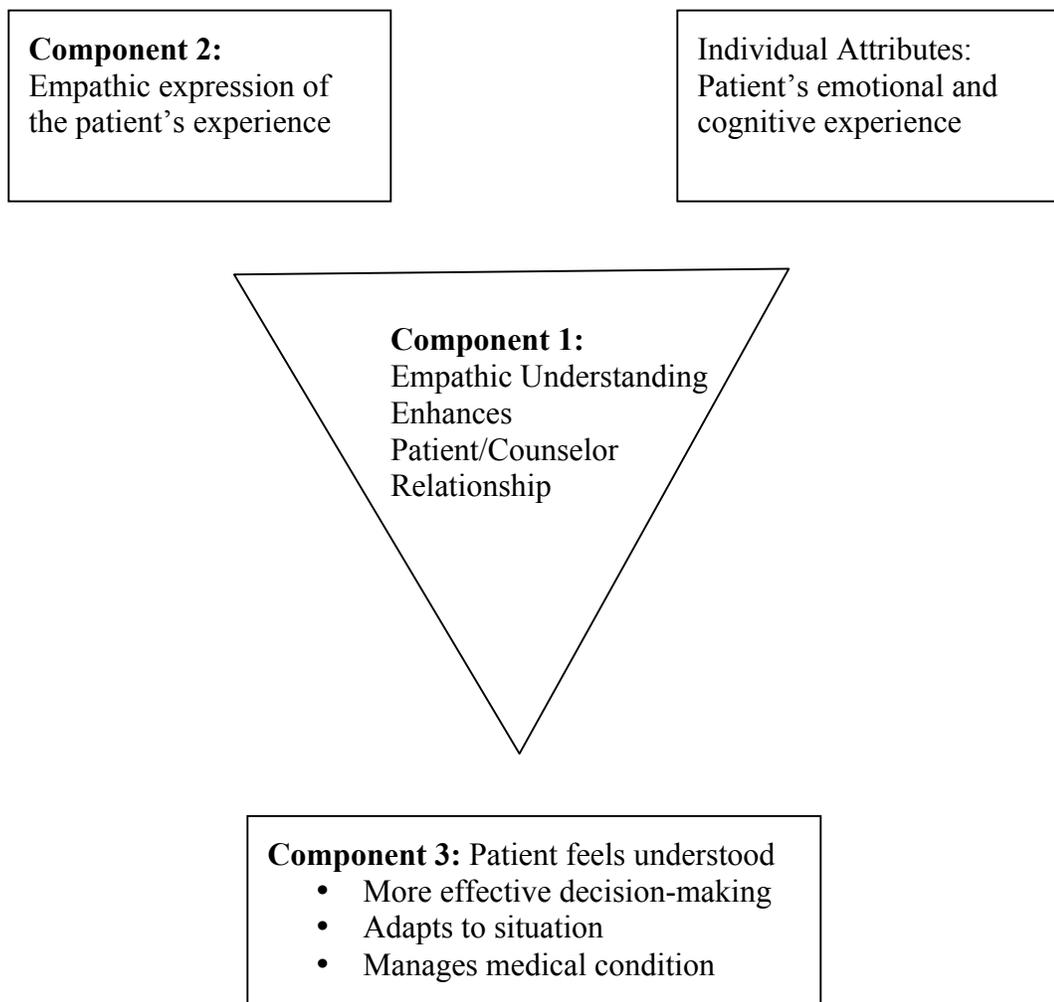
- Make decisions
- Manage condition
- Adapt to situation

Note. Each element interacts with every other element. None stand alone or work in isolation.

¹ Reprinted from McCarthy Veach et al. (2007) with permission of the authors and publisher

The findings of this study suggest Barrett-Lennard’s Three Component Model could be overlaid on the REM to illustrate how empathy may be applied in genetic counseling. This model, which this investigator is calling the “Reciprocal Engagement Model of Empathy” (REM-E; Figure 3), shows how empathy can be perceived in genetic counseling.

Figure 3. Reciprocal Engagement Model of Empathy (REM-E) in Genetic Counseling



Individual Attributes encompass the emotions a patient is experiencing and their cognitions about their situation. The Relationship represents Component One, which involves a connection between the genetic counselor and the patient that results from the genetic counselor being ‘in tune’ with the patient’s affective and cognitive experience (i.e. the patient’s individual attributes). The Educational tenet is commensurate with Barrett-Lennard’s Component 2, which is how the genetic counselor expresses empathy to the patient. Empathic communication includes timing and selection of biomedical information that is relevant to the patient’s situations and provision of this information in way that the patient can understand. Empathic communication also indicates the counselor how the patient is feeling about this information. Finally, Genetic Counseling Outcomes are similar to Barrett-Lennard Component 3, whereby the patient receives empathy from the genetic counselor and this understanding promotes exploration of their situation, facilitates decision-making, and contributes to their adaptation to their situation.

While the REM can stand alone as a model of genetic counseling practice, the addition of the Barrett-Lennard components into the model could lead to enhanced outcomes for patients. The present results provide empirical support for a unique aspect of the genetic counseling profession, namely the delicate balance providers maintain between providing medical information while attending to the myriad of psychosocial aspects that comes along with patients and their situations. The purpose of overlaying empathy on the REM, therefore, is to describe how genetic counselors might intentionally use empathy to augment their provision of genetic information to yield increased patient satisfaction and readiness to make medical decisions. In this way, the individual attributes (i.e., the patient’s emotional and cognitive experience), and the counselor’s

receipt and expression of the patient's experience, work in tandem through a healing relationship. The provision of genetic information, infused with genetic counselor empathy, helps the patient feel understood, satisfied with services, and able to more effectively make decisions, adapt to their situation, and manage their medical condition.

Empathy training. Carl Rogers (1975) advocated that empathy could be developed through clinical training under supervision. The results of this study are commensurate with Rogers' assertion. Genetic counselors attributed changes in their understanding and use of empathy to genetic counselor training, supervision, and clinical experience. Various methods described in this study have real implications for supervisors and genetic counselors. Primarily, anticipatory guidance and post-session reflection seem essential to empathy development. Both of these methods are characteristic of self-reflective practice which is theorized to be essential to genetic counselor professional development (cf. Zahm, 2010). While it was beyond the scope of this study to evaluate the efficacy of these methods, findings from other studies suggest that on-going self-reflective practice (Runyon et al., 2010) and on-going supervision, such as peer-supervision after graduation (Zahm et al., 2008) are important in helping genetic counselors develop professionally. Teaching students in supervision how to be reflective practitioners throughout their relationship with patients [from anticipatory guidance, to the genetic counseling session(s), to the end of the relationship) may enhance their empathy skills throughout their professional careers. Self-reflection can be encouraged through journaling (e.g., students can be asked to write about what they experienced in the session and how patients responded), clinical supervision (both as a student and in peer supervision as post-degree practitioners) in which they debrief about

their sessions. Self-reflection can begin even before students prepare for their first client with exercises such as a Self-Directed Protocol (Moffitt, 2009). Supervisors who use a self-directed protocol provide students with a list of stimulus questions that require them to contemplate the types of patients they will see and/or the types of unique challenges they will encounter in their clinical rotation. Self-directed protocols they encourage student development and refinement of Component 1 of Barrett-Lennard's Model of empathy – empathic understanding.

Another finding from this study has implications for training. Genetic counselors/students who missed opportunities to be empathic may have done so for a myriad of reasons, including skill deficits, trying to counsel for the supervisor and “get it right” instead of counseling for the patient, and fear of taking a risk. These findings suggest the importance of a positive supervisor-student relationship, so that a student feels open and able to describe their deficits and take risks in session. Application of the “Preventative Approaches” outlined by Boarders, Eubanks, and Callanan (2006) can help supervisors and students set goals to take risks with empathy, outline how the student would like their psychosocial skills to improve, and make empathy development a priority for both the supervisor and the student. Additionally, it is important to note that genetic counselors reported various methods that were helpful and several that were unhelpful in fostering empathy. Therefore, empathy development can be quite a variable experience and no one teaching method is applicable to everyone. Supervisors are encouraged to work with students to help determine the most effective methods for helping each individual increase their empathy skills.

Finally, supervisors reported the use of live supervision allowed them to evaluate students' ability to experience empathy, express empathy, and to evaluate the patient's receipt of empathy. This is similar to findings by Lindh and colleagues (Lindh, McCarthy Veach, Cikanek, & LeRoy, 2003) who reported that live supervision allowed supervisors to give feedback immediately following a session. Within this study, evaluation of the patient's receipt of empathy was particularly subjective, as it was often based on the supervisor's observation of the patient's reaction. As this component of empathy is so vital to patient outcomes, another training implication would involve teaching students how to check in with their patient's to ensure they are accurate in their understanding of the patient's experience. As mentioned earlier, one supervisor reported using a patient feedback form to help evaluate student performance with regards to psychosocial skills. Not only does such a form provide a more meaningful picture of the patient's experience, it also gives the patient time to reflect on their psychosocial experience in session while providing the student with salient information that can enhance their empathy development.

Research Recommendations

This study explored empathy development from the perspective of genetic counselors and supervisors. The results offer some empirical insights into the nature of empathy in genetic counseling and how empathy might be fostered through clinical supervision. Certainly, the use of qualitative interviews provides a degree of depth and breadth to our understanding that would not be achieved through survey methods. The use of surveys, however, may have allowed for further exploration of the efficacy of

various methods, for example, by having students rate or rank the efficacy of different types of empathy development interventions.

Additionally, the medical and mental health literatures contain studies supporting the effectiveness of different empathy training methods with their students. Similar studies in genetic counseling that include treatment and control groups would be very helpful in ascertaining which methods build empathy skills in genetic counseling students.

Finally, the most critical piece of empathy concerns the extent to which the patient feels heard and understood. Often, patients can be our best teachers. Future research could evaluate the use of simulated patients in helping students to learn empathy by providing immediate feedback on their empathy skills. Additionally, similar to one study in the medical literature (Wilkes et al., 2002), the effectiveness of simulated genetic counseling sessions could be evaluated by having genetic counseling students act as patients in genetic counseling settings, and thus providing the trainee with another opportunity to “walk in the patient’s shoes” and develop their empathy skills.

References

- Administrator's Manual: RAE. (1975). Toronto, Canada: Learning Designs.
- Ahn, H., & Wampold, B. E. (2001). Where oh where are the specific ingredients? A meta-analysis of component studies in counseling and psychotherapy, *Journal of Counseling Psychology, 48*(3), 251-257.
- American Board of Genetic Counseling, Inc. (2010, March). *Required criteria for graduate programs in genetic counseling seeking accreditation by the American Board of Genetic Counseling*. Retrieved from:
http://www.abgc.net/CMFiles/REQUIRED_CRITERIA_revised_Mar_25_200951KIH-432009-1159.pdf
- Aspey, D. (1975). Empathy: Let's get the hell on with it. *Counseling Psychologist, 5*(2), 10-14.
- Bachelor, A. (1988). How clients perceive therapist empathy: A content analysis of "received" empathy. *Psychotherapy, 25*(2), 227-240.
- Barrett-Lennard, G. T. (1981). The empathy cycle: Refinement of a nuclear concept. *Journal of Counseling Psychology, 28*(2), 91-100.
- Barak, A. (1990). Counselor training in empathy by a game procedure. *Counselor Education and Supervision, 29*(3), 170-179.
- Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The "Reading the Mind in the Eyes" Test revised version: A study with normal adults, and adults with Asperger's syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry, 42*(2), 241-251.
- Bath, K. E., & Calhoun, R. O. (1977). The effects of professional counselor training on

- empathy: Continued cause for concern. *Counselor Education and Supervision*, 17(2), 98-106.
- Benoit, L. G., McCarthy Veach, P., & LeRoy, B. S. (2007). When you care enough to do your very best: Genetic counselor experiences of compassion fatigue. *Journal of Genetic Counseling*, 16(3), 299-312.
- Bernard, J. M., & Goodyear, R. K. (1998). *Fundamentals of clinical supervision* (2nd ed.). Boston, MA: Allyn & Bacon.
- Borders, L. D., Eubanks, S., & Callanan, N. (2006). Supervision of psychosocial skills in genetic counseling. *Journal of Genetic Counseling*, 15(4), 211-223.
- Bower, M. A., McCarthy Veach, P., Bartels, D. M., & Leroy, B. S. (2002). A survey of genetic counselors' strategies for addressing ethical and professional challenges in practice. *Journal of Genetic Counseling*, 11(3), 163-186.
- Brothers, L. (1989). A biological perspective on empathy. *American Journal of Psychiatry*, 146(1), 10-19.
- Carkhuff, R. R. (1969). *Helping and human relations* (Vols. 1-2). New York: Holt, Rinehart & Winston.
- Carkhuff, R. R., & Pierce, R. M. (1975). *The art of helping: An introduction to life skills: A trainer's guide for developing helping skills of parents, teachers, and counselors*. Amherst, MA: Human Resource Development Press.
- Chin (2012).
- Colaizzi, P. (1978). Psychological research as a phenomenologist views it. In R. Valle, & M. King (Eds.), *Existential-phenomenological alternatives for psychology* (58-62). New York, NY: University Press.

- DasGupta, S., & Charon, R. (2004). Personal illness narratives: Using reflecting writing to teach empathy. *Academic Medicine*, 79(4), 353-356.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113-126.
- Deloney, L. A., & Graham, C. J. (2003). Using drama to teach first-year medical students about empathy and compassion. *Teaching and Learning in Medicine*, 15(4), 247-251.
- Dow, A. W., Leong, D., Anderson, A., & Wenzel, R. P. (2007). Using theater to teach clinical empathy: A pilot study. *Journal of General Internal Medicine*, 22(8), 1114-1118.
- Duric, V., Butow, P., Sharpe, L., Lobb, E., Meiser, B., Barratt, A., & Tucker, K. (2003). Reducing psychological distress in a genetic counseling consultation for breast cancer. *Journal of Genetic Counseling*, 12(3), 243-264.
- Dziobek, I., Fleck, S., Kalbe, E., Rogers, K., Hassenstab, J., Brand, M., ... Convit, A. (2006). Introducing MASC: A movie for the assessment of social cognition. *Journal of Autism and Developmental Disorders*, 36(5), 623-636.
- Eckman, P., & Friesen, W. V. (1971). Constants across culture in the face and emotion. *Journal of Personality and Social Psychology*, 17(2), 124-129.
- Figley, C. R. (2002). *Treating compassion fatigue*. New York, NY: Routledge.
- Fernald, P. S. (1995). Teaching students to listen empathically. *Teaching of Psychology*, 22(3), 183-186.

- Freud, S. (1955). Group psychology and the analysis of the ego. In J. Strachey (Ed.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol 18, pp. 65-144). London: Hogarth Press.
- Gantt, S., Billingsly, D., & Giordano, J. A. (1980). Paraprofessional skill: Maintenance of empathic sensitivity after training. *Journal of Counseling Psychology, 27*(4), 374-379.
- Giarelli, E., & Tulman, L. (2003). Methodological issues in the use of cartoons as data. *Qualitative Health Research, 13*(7), 945-956.
- Gladstein, G. A. (1983). Understanding empathy: Integrating counseling, developmental, and social psychology perspectives. *Journal of Counseling Psychology, 30*(4), 467-482.
- Glaser, K. M., Markham, F. W., Adler, H. M., McManus, P. R., & Hojat, M. (2007). Relationships between scores on the Jefferson Scale of physician empathy, patient perceptions of physician empathy, and humanistic approaches to patient care: A validity study. *Medical Science Monitor, 13*(7), CR291-294.
- Glessner, H. D. (2012) Will my voice be heard? *Journal of Genetic Counseling, 21*(2), 189-191.
- Gordan, (2012).
- Gormally, J., & Hill, C. E. (1974). Guidelines for research on Carkhuff's training model. *Journal of Counseling Psychology, 21*(6), 539-547.
- Halpern, J. (2003). What is clinical empathy? *Journal of General Internal Medicine, 18*(8), 670-674.

- Hassenstab, J., Dziobek, I., Rogers, K., Wolf, O. T., & Convit, A. (2007). Knowing what others know, feeling what others feel. *Journal of Nervous and Mental Disease*, 195(4), 277-281.
- Hendrickson, S. M., McCarthy Veach, P., & LeRoy, B. S. (2002). A qualitative investigation of student and supervisor perceptions of live supervision in genetic counseling. *Journal of Genetic Counseling*, 11(1), 25-49.
- Henry-Tillman, R., Deloney, L. A., Savidge, M., Graham, C. J., & Klimberg, S. (2002). The medical student as patient navigator as an approach to teaching empathy. *American Journal of Surgery*, 183(6), 659-662.
- Hickson et al., (2002).
- Hill, C. E., & Lent, R. W. (2006). A narrative and meta-analytic review of helping skills training: Time to revive a dormant area of inquiry. *Psychotherapy: Theory, Research, Practice, Training*, 43(2), 154-172.
- Hill, C. E., Knox, S., Thompson, B. J., Williams, E. N., Hess, S. A., & Ladany, N. (2005). Consensual qualitative research: An update. *Journal of Counseling Psychology*, 52(2), 196-205.
- Hill, C. E., Thompson, B. J., & Williams, E. N. (1997). A guide to conducting consensual qualitative research. *The Counseling Psychologist*, 25(4), 517-572.
- Hojat, M., Louis, D. Z., Markham, F. W., Wender, R., Rabinowitz, C., & Gonnella, J. S. (2011). Physicians' empathy and clinical outcomes for diabetic patients. *Academic Medicine: Journal of the Association of American Medical Colleges*, 86(3), 359-364.

- Hojat, M., Mangione, S., Nasca, T. J., Rattner, S., Erdmann, J. B., Gonnella, J. S., & Magee, M. (2004). An empirical study of decline in empathy in medical school. *Medical Education, 38*(9), 934–941.
- Hojat, M., Mangione, S., Nasca, T.J., Cohen, J.M.M., Gonnella, J.S., Erdmann, J.B., Veloski, J., & Magee, M. The Jefferson scale of empathy: Development and preliminary psychometric data. *Educational Psychology Measures, 61*, 349-365.
- Ivey, A. E. (1994). *Intentional interviewing and counseling: Facilitating client development in a multicultural society* (3rd ed.). Pacific Grove, CA: Brooks Cole.
- Ivey, A. E., & Authier, J. (1978). *Microcounseling: Innovations in interviewing, counseling, psychotherapy, and practice*. Springfield, IL: Thomas.
- Ivey, A. E., & Ivey, M. B. (2009). *Intentional interviewing and counseling: Facilitating client development in a multicultural society* (7th ed.). Belmont, CA: Brooks Cole.
- Ivey, A. E., Ivey, M. B., & Simek-Downing, L. (1987). *Counseling and Psychotherapy* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Kao, J., McCarthy Veach, P., & LeRoy, B. S. (2010). *Walking in your patients' shoes: An investigation of genetic counselor empathy in clinical practice*. (Doctoral dissertation). Presented at the National Society of Genetic Counselors' Annual Education Conference, Dallas, TX.
- Kenny, D. A. (1995) Relationship science in the 21st century. *Journal of Social and Personal Relationships, 12*(4), 597-600.
- Kessler, S. (1999). Psychological aspects of genetic counseling: XIII. Empathy and decency. *Journal of Genetic Counseling, 8*(6), 333-343.

- Kurtz, R. R., & Grummon, D. L. (1972). Different approaches to the measurement of therapist empathy and their relationship to therapy outcomes. *Journal of Consulting and Clinical Psychology, 39*(1), 106-115.
- Lambert, M. J., & Barley, D. E. (2001). Research summary on the therapeutic relationship and psychotherapy outcome. *Psychotherapy: Theory, Research, Practice, Training, 38*(4), 357-361.
- Lambert, M. J., DeJulio, S. S., & Stein, D. M. (1978). Therapist interpersonal skills: Process, outcome, methodological considerations, and recommendations for future research. *Psychological Bulletin, 85*(3), 467-489.
- LaMonica, E. L. (1996). *Empathy Construct Rating Scale*. Santa Clara, CA: Xicom, Inc.
- Lesh, T. V. (1970). Zen meditation and the development of empathy in counselors. *Journal of Humanistic Psychology, 10*(1), 39-74
- Lin, C. S., Hsu, M-Y. F., & Chong, C. F. (2008). Differences between emergency patients and their doctors in the perception of physician empathy: Implications for medical education. *Education for Health, 21*(2), 1-9.
- Lindh, H. L., McCarthy Veach, P., Cikanek, K., & LeRoy, B. S. (2003). A survey of clinical supervision in genetic counseling. *Journal of Genetic Counseling, 12*(1), 23-41.
- Lyons-Halaris, A. (1979). *Relationship of perceived empathy to nurses' non-verbal communication*. (Unpublished masters thesis). University of Illinois, Chicago, US.

- Marci, C. D., & Riess, H. (2005). The clinical relevance of psychophysiology: Support for the psychobiology of psychodynamic process. *American Journal of Psychotherapy*, 59(3), 213-226.
- Markakis, K., Frankel, R., Beckman, H., & Suchman, A. (1999). "Teaching empathy: It can be done." Working paper presented at the Annual Meeting of the Society of General Internal Medicine. San Francisco, CA. 29 April to 1 May, 1999.
- Markham B. (1979). Can a behavioral science course change medical students' attitudes? *Journal of Psychiatric Education*, 3(1), 44-54.
- Mathieson, (2012). Counseling the "angry patient": A defining moment of changing focus from myself to the patient. *Journal of Genetic Counseling*, 21(2), 209-210.
- McCarthy, P. R., Danish, S. J., & D'Augelli, A. R. (1977). A follow-up evaluation of helping skills training. *Counselor Education and Supervision*, 17(1), 29-35.
- McCarthy Veach, P., Bartels, D. M., & LeRoy, B. S. (2001). Ethical and professional challenges posed by patients with genetic concerns: A report of focus group discussions with genetic counselors, physicians, and nurses. *Journal of Genetic Counseling*, 10(2), 97-119.
- McCarthy Veach, P., Bartels, D. M., & LeRoy, B. S. (2007). Coming full circle: A Reciprocal-Engagement Model of genetic counseling practice. *Journal of Genetic Counseling*, 16(6), 713-728.
- McCarthy Veach, P., & LeRoy, B. S. (2012). Defining moments in genetic counselor professional development: one decade later. *Journal of Genetic Counseling*, 21(2), 162-166.

- McCarthy Veach, P., LeRoy, B. S., & Bartels, D. M. (2003). *Facilitating the genetic counseling process: A practice manual*. New York, NY: Springer-Verlag.
- McCarthy Veach, P., Truesdell, S. E., LeRoy, B. S., & Bartels, D. M. (1999). Client perceptions of the impact of genetic counseling: An exploratory study. *Journal of Genetic Counseling*, 8(4), 191-216.
- McCollum, E. E., & Gehart, D. R. (2010). Using mindfulness meditation to teach beginning therapists therapeutic presence: A qualitative study. *Journal of Marital and Family Therapy*, 36(3), 347-360.
- Mehrabian, A. (1996). *Manual for the Balanced Emotional Empathy Scale (BEES)*. Available from Albert Mehrabian, 1130 Alta Mesa Road, Monterey, CA, USA 93940.
- Mitchell, K., & Berenson, B. (1970). Differential use of confrontation by high and low effective therapists. *Journal of Nervous Mental Disorder*, 151(5), 303-309.
- Miville, M. L., Redway, J. A. K., & Hernandez, E. (2011). Microskills, trainee competence, and therapy outcomes: Learning to work in circles. *The Counseling Psychologist*, 39(6), 897-907.
- Moffett, L.A. Directed self-reflection protocols in supervision. *Training and Education in Professional Psychology*, Vol 3(2), 78-83.
- Nerdrum, P. (1997). Maintenance of the effect of training in communication skills: A controlled follow-up study of level of communicated empathy. *British Journal of Social Work*, 27(5), 705-722.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.

- Resta, R., Biesecker, B. B., Bennett, R. L., Blum, S., Hahn, S. E., Strecker, M. N., & Williams, J. L. (2006). A new definition of genetic counseling: National society of genetic counselors task force report. *Journal of Genetic Counseling, 15*(2), 77-83.
- Ridley, C. R., Kelly, S. M., & Mollen, D. (2011). Microskills training: Evolution, reexamination, and call for reform. *The Counseling Psychologist, 39*(6), 800-824.
- Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology, 11*, 95- 103.
- Rogers, C. R. (1959). A theory of therapy, personality and interpersonal relationships as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A study of a science* (Vol. 3: *Formulations of the Person and the Social Context*). New York, NY: McGraw Hill.
- Rogers, C. R. (1975). Empathic: An unappreciated way of being. *The Counseling Psychologist, 5*(2), 2-10.
- Rogers, C. R. (1980). *A way of being*. Boston, MA: Houghton Millflin Co.
- Roh, M-S., Hahm, B-J., Lee, D. H., & Suh, D. H. (2010). Evaluation of empathy among Korean medical students: A cross-sectional study using the Korean version of the Jefferson Scale of Physician Empathy. *Teaching and Learning in Medicine, 22*(3), 167-171.
- Ross, E. D., & Mesulam, M. M. (1979). Dominant language functions of the right hemisphere. *Archives of Neurology, 36*(3), 144-148.
- Runyon, M., Zahm, K. W., McCarthy Veach, M., Macfarlane, I. M., & LeRoy, B. S. (2010). What do genetic counselors learn on the job? A qualitative assessment of

- professional development outcomes. *Journal of Genetic Counseling*, 19(4), 371-386.
- Sagi, A., & Hoffman, M. L. (1976). Empathic distress in the newborn. *Developmental Psychology*, 12(2), 175-176.
- Shapiro, J. (2002). How do physicians teach empathy in the primary care setting? *Academic medicine*, 77(4), 323-328.
- Shapiro, J., Morrison, E. H., & Boker, J. R. (2004). Teaching empathy to first year medical students: Evaluation of an elective literature and medicine course. *Education for Health*, 17(1), 73-84.
- Shapiro, J., Rucker, L., & Robitshek, D. (2006). Teaching the art of doctoring: An innovative medical student elective. *Medical Teacher*, 28(1), 30-35.
- Spencer, J. (2004). Decline in empathy in medical education: How can we stop the rot? *Medical Education*, 38(9), 916-920.
- Spiro, H. (1992). What is empathy and can it be taught? *Annals of Internal Medicine*, 116(10), 843-846.
- Stokes, J., & Lautenschlager, G. (1978). Development and validation of the Counselor Response Questionnaire. *Journal of Counseling Psychology*, 25(2), 157-163.
- Titchener, E. (1909). *Experimental psychology of the thought process*. New York: Macmillan.
- Truax, C. B., & Carkhuff, R. R. (1967). *Toward effective counseling and psychotherapy: Training and practice*. Chicago, IL: Aldine.

- Udipi, S., McCarthy Veach, P., Kao, J., & LeRoy, B. S. (2008). The psychic costs of empathic engagement: Personal and demographic predictors of genetic counselor compassion fatigue. *Journal of Genetic Counseling, 17*(5), 459-471.
- Van Velsor, P. (2004). Revisiting basic counseling skills with children. *Journal of Counseling & Development, 82*(3), 313-318.
- Vincent, S. (2005). *Being empathic: A companion for counsellors and therapists*. Oxon, UK: Radcliffe Publishing, Inc.
- Weil J. (2000). *Psychosocial genetic counseling*. New York, NY: Oxford University Press.
- Wilkes, M., Milgrom, E., & Hoffman, J. R. (2002). Towards more empathic medical students: A medical student hospitalization experience. *Medical Education, 36*(6), 528-533.
- Winefield, H. R., & Chur-Hansen, A. (2000). Evaluating the outcome of communication skill teaching for entry-level medical students: Does knowledge of empathy increase? *Medical Education, 34*(2), 90-94.
- Wispe, L. (1987). History of the concept of empathy. In N. Eisenberg & J. Strayer (Eds.), *Empathy and its development* (pp. 17-37). New York, NY: Cambridge University Press.
- Young, M. (2005). *Learning the art of helping: Building blocks and techniques* (3rd ed.). Upper Saddle River, NJ: Pearson.
- Zahm, K., McCarthy Veach, P., & LeRoy B. S. (2008). An investigation of genetic counselor experiences in peer group supervision, *Journal of Genetic Counseling, 17*(3), 220-233.

Appendix A: IRB Approval

UNIVERSITY OF MINNESOTA

Twin Cities Campus

*Human Research Protection Program
Office of the Vice President for Research*

*D528 Mayo Memorial Building
420 Delaware Street S.E.
MMC 820
Minneapolis, MN 55455
Office: 612-626-5654
Fax: 612-626-6061
E-mail: irb@umn.edu or ibc@umn.edu
Website: <http://research.umn.edu/subjects/>*

06/28/2011

Erin R VandenLangenberg
Psychiatry, Dept of
F282/2A West-B
2450 Riverside Ave
Minneapolis, MN 55454

RE: "Empathy in Genetic Counseling: The Role of Supervision in Learning Empathy"
IRB Code Number: **1106P01100**

Dear Ms. VandenLangenberg:

The Institutional Review Board (IRB) received your response to its stipulations. Since this information satisfies the federal criteria for approval at 45CFR46.111 and the requirements set by the IRB, final approval for the project is noted in our files. Upon receipt of this letter, you may begin your research.

IRB approval of this study includes the consent form, and the supervisor consent form, both dated June 22, 2011 and the e-mail to program directors, received June 14, 2011.

The IRB would like to stress that subjects who go through the consent process are considered enrolled participants and are counted toward the total number of subjects, even if they have no further participation in the study. Please keep this in mind when calculating the number of subjects you request. This study is currently approved for 40 subjects. If you desire an increase in the number of approved subjects, you will need to make a formal request to the IRB.

For your records and for grant certification purposes, the approval date for the referenced project is June 20, 2011 and the Assurance of Compliance number is FWA00000312 (Fairview Health Systems Research FWA00000325, Gillette Children's Specialty Healthcare FWA00004003). Research projects are subject to continuing review and renewal; approval will expire one year from that date. You will receive a report form two months before the expiration date. If you would like us to send certification of approval to a funding agency, please tell us the name and address of your contact person at the agency.

As Principal Investigator of this project, you are required by federal regulations to inform the IRB of any proposed changes in your research that will affect human subjects. Changes should not be initiated until written IRB approval is received. Unanticipated problems or serious unexpected adverse events should be reported to the IRB as they occur.

The IRB wishes you success with this research. If you have questions, please call the IRB office at 612-626-5654.

Sincerely,



Christina Dobrovolny, CIP
Research Compliance Supervisor
CD/ks

CC: Bonnie LeRoy, Patricia Veach

Appendix B: Invitation for Genetic Counselors

Dear Genetic Counselor:

You are invited to be in a research study of empathy training in genetic counseling. You were selected as a possible participant because of your professional training and experience as a genetic counselor and your active membership in the National Society of Genetic Counselors.

This study is being conducted by Erin VandenLangenberg, graduate student in Educational Psychology, with support from Pat McCarthy Veach, Department of Educational Psychology, and Bonnie LeRoy, Department of Genetics, Cell Biology and Development (GCD), at the University of Minnesota.

The purpose of this study is to learn more about empathy development as it occurs in clinical settings as part of genetic counselor training. Developing our understanding of effective empathy training particular to genetic counseling is necessary to maximize empathy in patient care and to promote desired genetic counseling processes and outcomes. Therefore, this study will investigate how genetic counselors are taught empathy in their training by asking what recent graduates of genetic counseling programs and supervisors consider to be the best ways to foster empathic growth.

This survey will take approximately ten minutes. It inquires about your demographic information and about defining empathy in genetic counseling. At the end of this survey please leave your contact information to schedule a follow-up telephone interview that will take about twenty minutes. You may choose not to leave your contact information but still participate in the online survey. The telephone interview will ask questions about your empathy training and development. The interview will be audio-taped and all information will be confidential.

The risks involved in participating in this study are minimal. You may experience some mild discomfort due to reflecting upon your genetic counseling training.

The study is anonymous. No identifiable information will connect your data to you. Participation in this study is voluntary. Your decision on whether or not to participate will not affect your relationship with the University of Minnesota, or any of the investigators.

If you have questions, you may contact Erin VandenLangenberg (vand0379@umn.edu), Pat McCarthy Veach (veach001@umn.edu or 612-624-3580), or Bonnie LeRoy (leroy001@umn.edu or 612-624-7193). If you have any questions or concerns regarding the study and would like to talk to someone other than the researchers, you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; telephone (612) 625-1650.

Thank you for your time and participation.

Sincerely,
Erin VandenLangenberg, M.P.H., M.A.
Doctoral Candidate
Department of Educational Psychology

Appendix C: Survey Monkey – Genetic Counselors and Supervisors

Demographic Questions

1. What is your current age?
2. What is your sex?
 - a. Female
 - b. Male
 - c. Other
 - d. Prefer not to answer
3. What is your ethnic background?
 - a. American Indian or Alaskan Native
 - b. Asian
 - c. Bi-racial (Please specify): _____
 - d. Black or African American
 - e. Caucasian or White
 - f. Hispanic/Chicano/Latina(o)
 - g. Native Hawaiian or other Pacific Islander
 - h. Other (Please specify): _____
4. What is your current relationship status?
 - a. Divorced
 - b. In a committed, long term relationship
 - c. Married
 - d. Single
 - e. Widowed
 - f. Other (please specify): _____
5. Do you have children?
 - a. Yes
 - b. No
6. How many total MONTHS post-graduation genetic counseling experience do you have?
7. What is your current specialty?
 - a. Cancer
 - b. Infertility
 - c. Molecular/Cytogenetics
 - d. Neurogenetics
 - e. Pediatric
 - f. Prenatal
 - g. Psychiatric
 - h. Public Health
 - i. Specialty disease

- j. Teratogen
 - k. Other (Please specify): _____
8. What is your **primary** work setting?
- a. Diagnostic laboratory
 - b. Federal, state, county office
 - c. Group private practice
 - d. Health maintenance organization
 - e. Individual private practice
 - f. Private Hospital or facility
 - g. University Medical Center
 - h. Other (Please specify): _____
9. Since graduating, have you been seeing patients clinically?
- a. Yes
 - b. No
10. On average, how many patients do you see per week?
11. What year did you graduate from your genetic counseling training program?
12. Was your genetic counseling training program accredited by the American Board of Genetic Counseling (ABGC)?
- a. Yes
 - b. No
- *If no, how did you receive genetic counselor training?
13. Please list the names of the psychosocial/counseling course(s) you took as part of your genetic counselor training.
14. Was your genetic counseling program housed in a:
- a. Medical School
 - b. School of Public Health
 - c. Psychology Department
 - d. Social Work Department
 - e. Other (please specify): _____
15. In what NSGC region do you currently practice?
- a. Region I (CT, MA, ME, NH, RI, VT, Canadian Maritime Provinces)
 - b. Region II (DC, DE, MD, NJ, NY, PA, VA, WV, Quebec, Puerto Rico, Virgin Islands)
 - c. Region III (AL, FL, GA, KY, MS, NC, SC, TN)
 - d. Region IV (AR, IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI, Ontario)
 - e. Region V (AZ, CO, MT, NM, TX, UT, WY, Alberta, Manitoba, Saskatchewan)

- f. Region VI (AK, CA, HI, NV, OR, WA, British Columbia)
- g. Other (please specify):_____

16. Have you been a clinical supervisor for genetic counseling students?

- a. Yes
- b. No

*If yes, how many total MONTHS of supervision experience do you have?

17. If yes to Question 16, how many students have you supervised?

Defining of Empathy

18. How would you define genetic counselor empathy in a genetic counseling session?

19. May I contact you to participate in a twenty minute interview at your convenience inquiring more about your definition of empathy?

*If yes, please provide your name, telephone number, and the best time to call you.

Appendix D: Interview Protocol – Genetic Counselors

Hello! Thank you for agreeing to participate in a telephone interview regarding your genetic counselor training and empathy development. Your response to my email is considered your consent to participate in the interview. The interview will take about 20 minutes and will be audio recorded.

You may recall from the survey that you completed that I asked you to define empathy in genetic counseling. You wrote [insert definition], Would you like to comment further on your written definition?

Where did you learn this definition of empathy? How is this different, if at all, from when you started in your training program?

How well do you feel like you understand what empathy is in genetic counseling?

DEFINITIONS OF EMPATHY

A) What does empathy look like with genetic counseling patients? What do you experience? What do you say? Do? What does the patient perceive? (Be specific/give examples, if possible.)

B) Can you give me an example of a specific situation in which you used empathy effectively in a genetic counseling session? (What was the situation? What did you say? Do? How did the patient respond?)

C) Can you give me an example of a specific situation in which when you were not empathic or you had difficulty being empathic in a genetic counseling session? What was the situation? What did you say/not say? Do/not do? How did the patient respond? What do you think you might have done differently? If you can't think specific examples, give a typical situation that you find difficult. Tell what makes it difficult for you and why.

EMPATHY TRAINING/DEVELOPMENT

D) How was your empathy development influenced by your genetic counselor training? Were there methods that were helpful, i.e. your own methods or those of a teacher? What methods were unhelpful?

E) In thinking about your clinical supervision, what role, if any, did supervisors play in fostering your empathy development? Where there methods used that fostered your development? Were there methods that were not helpful?

F) How has your understanding and/or use of empathy changed/developed over time, if at all, since you started your genetic counselor training program several years ago? To what do you attribute these changes in your understanding of empathy? When, if ever, do you think you finally "got" what empathy is all about with respect to patients? and Why?

G) Is there anything else you would care to comment on?

Appendix E: Email to Genetic Counselor Program Directors

Dear Genetic Counseling Program Director:

My name is Erin VandenLangenberg and I am a doctoral student in counseling psychology at the University of Minnesota. For my dissertation, I am conducting a study of the acquisition and development of empathy in genetic counselor training. The goal of this study is to provide further information about empathy development to help guide future training of genetic counseling students and genetic counselor professional development. This study is being conducted under the direction of Patricia McCarthy Veach, Ph.D., L.P., and Bonnie S. LeRoy, M.S., C.G.C., through the Educational Psychology Department of the University of Minnesota.

My study has been approved by the University of Minnesota Institutional Review Board. I am planning to conduct qualitative interviews with genetic counseling clinical supervisors who are known to focus on empathic development in their supervision. To that end, I am hoping that you would **nominate two supervisors** who you feel would be willing to be interviewed about their understanding of the concept of empathy, how it is used in genetic counseling, and some of their practices as a supervisor.

I am asking your help in forwarding the following link along to two supervisors who you feel focus on empathy development in their supervision of students. I have attached a copy of the information/consent form and a link to the survey (below) for your review.

<http://www.surveymonkey.com/s/NMQFYBT>

The survey and interviews will be confidential, and participation will not affect the supervisors current or future relations with the University of Minnesota. If you have questions, you may contact Erin VandenLangenberg (vand0379@umn.edu or 612-810-6257), Pat McCarthy Veach (veach001@umn.edu or 612-624-3580), or Bonnie LeRoy (leroy001@umn.edu or 612-624-7193). If you have any questions or concerns regarding the study and would like to talk to someone other than the researcher(s), contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; telephone (612) 625-1650.

Thank you for your consideration!

Sincerely,

Erin VandenLangenberg, M.P.H., M.A.
Doctoral Candidate
Department of Educational Psychology
University of Minnesota
Email: vand0379@umn.edu

Appendix F: Invitation for Genetic Counselor Supervisor

Dear Genetic Counselor Supervisor:

You are invited to be in a research study of empathy training in genetic counseling. You are invited to be in a research study of empathy training in genetic counseling. You were selected by a program director from a genetic counseling program as someone with experience in supervision and empathy development in genetic counseling students.

This study is being conducted by Erin VandenLangenberg, graduate student in Educational Psychology, with support from Pat McCarthy Veach, Department of Educational Psychology, and Bonnie LeRoy, Department of Genetics, Cell Biology and Development (GCD), at the University of Minnesota.

The purpose of this study is to learn more about empathy development as it occurs in clinical settings as part of genetic counselor training. Developing our understanding of effective empathy training particular to genetic counseling is necessary to maximize empathy in patient care and to promote desired genetic counseling processes and outcomes. Therefore, this study will investigate how genetic counselors are taught empathy in their training by asking what recent graduates of genetic counseling programs and supervisors consider to be the best ways to foster empathic growth.

This survey will take approximately ten minutes. It inquires about your demographic information and about defining empathy in genetic counseling. At the end of this survey please leave your contact information to schedule a follow-up telephone interview that will take about twenty minutes. You may choose not to leave your contact information but still participate in the online survey. The telephone interview will ask questions about your supervision of genetic counseling students, in general, and about empathy training, in specific. The interview will be audio-taped and all information will be confidential.

The risks involved in participating in this study are minimal. You may experience some mild discomfort due to reflecting upon your genetic counseling training and/or supervision.

The study is anonymous. No identifiable information will connect your data to you. Participation in this study is voluntary. Your decision on whether or not to participate will not affect your relationship with the University of Minnesota, or any of the investigators.

If you have questions, you may contact Erin VandenLangenberg (vand0379@umn.edu), Pat McCarthy Veach (veach001@umn.edu or 612-624-3580), or Bonnie LeRoy (leroy001@umn.edu or 612-624-7193). If you have any questions or concerns regarding the study and would like to talk to someone other than the researchers, you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; telephone (612) 625-1650.

Thank you for your time and participation.

Sincerely,

Erin VandenLangenberg, M.P.H., M.A.
Doctoral Candidate
Department of Educational Psychology

Appendix G: Interview Protocol – Genetic Counselor Supervisors

Hello! Thank you for agreeing to participate in a telephone interview regarding your genetic counselor training and empathy development. Your response to my email is considered your consent to participate in this interview. This interview will take about 20 minutes and will be audio recorded.

You may recall from the survey that you completed that I asked you to define empathy in genetic counseling. You wrote [insert definition], Would you like to comment further on your written definition?

Where did you learn this definition of empathy? How is this different, if at all, from when you started in your training program?

How well do you feel like you understand what empathy is in genetic counseling?

DEFINITIONS OF EMPATHY

A) What does empathy look like with genetic counseling patients? What does a genetic counselor experience? What does the counselor say or do? What does the patient perceive? (Be specific and give examples, if possible.)

B) Can you give me an example of a specific situation in which you saw a genetic counseling student use empathy effectively in a genetic counseling session? (What was the situation? What did the student say? Do? How did the patient respond?)

C) Can you give me an example of a specific situation in which a student was not empathic or had difficulty being empathic in a genetic counseling session? What was the situation? What did the student say/not say? Do/not do? How did the patient respond? What do you think the student might have done differently? If you can't think of things specifically, give me a typical situation that students find difficult. Tell me what makes it difficult for them and why.

EMPATHY TRAINING/DEVELOPMENT

D) How, in your supervision, do you attempt to foster students' empathy development? That is, what do you say and do? Do you use particular methods?

E) How do you evaluate your students' ability to experience empathy? To express empathy to patients? How do you determine whether the patient is receiving the students' empathy? When do you think students finally "get" what empathy is all about with respect to patients, if ever? and Why?

F) How can you tell when a student is developing empathy capacity/skills, as opposed to a student who is not? What do you see? What do you do when a student is having difficulty developing empathy skills?

G) How has your fostering of empathy in your students changed/developed over time, if at all, since you first began as a genetic counseling supervisor? To what do you attribute these changes?

H) Is there anything else you would care to comment on?