Anxiety's Effect on the Experience of Supervision of Genetic Counseling Students

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Dedication

To Abigail
My partner, life mate, and best friend
Whose patience let me finish this work
Whose love kept me from getting lost in it

Abstract

Genetic counseling has been a recognized profession in North America for over 40 years. Supervised clinical experiences with patients comprise a critical component of genetic counseling student education. Previous research has found genetic counseling students s tend to be more anxiety prone than the general population (Jungbluth et al., 2011), and anxiety related to supervision has been found in genetic counseling (e.g., Hendrickson et al., 2002) and related fields (e.g., Skovholt & Ronnestad, 2003). The present study investigated how anxiety affects the experience of supervision for genetic counseling students. Second year genetic counseling students (~N = 200) were invited to participate through email invitations distributed via training directors of the 33 programs accredited by the American Board of Genetic Counseling. The initial online survey contained the trait scale of the State-Trait Anxiety Inventory (STAI; Spielberger et al., 1983) to estimate anxiety proneness in this population and an invitation to participate in a 1-hour interview focusing on students' experiences in supervision. The interviews questions investigated seven research questions focusing on satisfaction with training, interactions with patients and supervisors, perceptions of the structure and processes of supervision, and experiences related to anxiety. High, moderate, and low trait anxiety groups were created using STAI scores, and the high and low groups' interview responses were compared using consensual qualitative research methodology (CQR; Hill, 2012). Analysis discovered relatively few differences between groups. The high anxiety group was more likely to describe problematic supervisory relationships, appreciate the supervisor's ability to help them when they get stuck in sessions, and feel their anxiety had a negative effect on their performance in general and in supervision. Common

themes included supervisors' balancing support and guidance, the importance of feedback, ego-centric responses, and supervisors as focal points. Students unanimously reported positive levels of satisfaction with their clinical rotations in general and supervision specifically. The results of the present study are largely consistent with the literature, including recently published supervision competencies (Eubanks Higgins et al., 2013). Further research findings and research, practice, and training recommendations are provided.

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Chapter 1: Introduction

The first genetic counseling master's degree program was founded in 1969 at Sarah Lawrence University (Stern, 2009). Ten years later, the National Society for Genetic Counselors (NSGC) was formed to provide "professional legitimacy, a secure job title, and a forum for graduates of genetic counseling programs in North America to further the goals of standardization and best practices" (Stern, 2009, p. 1). In 2006, the NSGC adopted the following definition of genetic counseling:

> *[Genetic counseling] is the process of helping people understand and adapt to the medical, psychological and familial implications of genetic contributions to disease. This process integrates the following:*
>
> - *Interpretation of family and medical histories to assess the chance of disease occurrence or recurrence.*
> - *Education about inheritance, testing, management, prevention, resources and research.*
> - *Counseling to promote informed choices and adaptation to the risk or condition.*
>
> *Genetic counseling is a communication process in which trained professionals help individuals and families deal with issues associated with the risk of or occurrence of a genetic disorder.* (Resta et al., 2006, p. 77)

Currently, the American Board of Genetic Counseling (ABGC) has accredited 34 master's level genetic counseling programs in North America (31 in the United States and 3 in Canada). These programs provide training to approximately 500 students per

year through curricula focusing on basic science, bioethics, counseling skills, and supervised clinical training across a wide range of rotations (e.g., prenatal, pediatric, cancer, adult). The experiences students gain during supervised clinical rotations are essential to their professional development and future successful practice of genetic counseling (Borders, Eubanks, & Callanan, 2006; McCarthy Veach & LeRoy, 2009).

Clinical supervision is a critical component of genetic counseling preparation (McCarthy Veach & LeRoy, 2009). Bernard and Goodyear (2009) define supervision as an evaluative relationship which extends over time between a more experienced member of a profession and trainees or novices in that same profession. The purposes of the supervisory relationship, according to Bernard and Goodyear, are ensuring a standard of client care, promoting supervisee development of requisite skills, socializing supervisees into the profession, and "gatekeeping" so only qualified individuals are allowed to enter the profession. Supervised clinical training is a required component for genetic counseling programs so students can develop clinical skills in an environment which protects the students as well as patients. The intention is to gradually increase the student's independence in preparation for professional status. Certified genetic counselors must provide the supervision to ensure services meet acceptable standards. Live supervision (i.e., the supervisor is present in the room during sessions) followed by post-session debriefings is the most common model of supervision in genetic counseling training programs (Lindh, McCarthy Veach, Cikanek, & LeRoy, 2003). Additional supervision activities include goal setting, feedback, formal (written) evaluation, and building a working relationship that fosters supervisee trust and openness.

While it can be a wonderful experience for beginners to have an experienced professional to turn to for support and guidance as they begin to navigate the challenging world of genetic counseling, the gatekeeping aspects of supervision rarely go unnoticed by supervisees. Students in particular may feel tension in the supervisory relationship, as they are dependent on supervisors' evaluations for passing grades, but also need to ask for assistance in providing patient care. They want to perform as well as possible to secure positive evaluations, but they also need to share their challenging moments and mistakes in order to grow as counselors. These often conflicting imperatives would seem to be anxiety-provoking, as the stakes are high, evaluation is fairly subjective, and students are just beginning to develop the skills necessary for the profession. It also seems intuitive that having a supervisor directly observe one's work would be more anxiety-provoking than supervision based on supervisee self-report, as there is no opportunity for the supervisee to frame issues in a more positive light. Given these considerations, the purpose of the present study was to investigate genetic counseling students' experiences of anxiety related to supervision in order to provide training and research recommendations.

Significance of the Problem

Recently, the first set of preliminary supervision competencies for genetic counseling was published (Eubanks Higgins et al., 2013). This publication signals increased attention to empirically-derived understanding of genetic counseling supervision which began 11 years ago with the first published data-based study (Hendrickson, McCarthy Veach, & LeRoy, 2002). Given research on genetic counseling supervision is nascent, additional investigations are warranted. Much of the extant

literature involves supervisor perspectives. Studies of student supervisees, therefore, are particularly important.

Jungbluth, MacFarlane, McCarthy Veach, and LeRoy (2011) found a typical genetic counseling student experiences levels of trait anxiety corresponding to the 85th percentile according to published norms for adult working women (Spielberger et al., 1983). Anxiety related to supervision has been called "a given…which must be taken into account by supervisors" (Borders, Eubanks, & Callanan, 2006) and described as normative in genetic counseling (e.g., McCarthy Veach, LeRoy, & Bartels, 2003) and related fields such as medicine (e.g., Hajek, Hajberg, & Cushing, 2000; Hales & Borus, 1986; Jiang et al., 2003; Sarikaya, Cinaver, & Kalaca, 2006; Stewart, Lam, Betson, Wong, & Wong, 1999) and mental health (e.g., Bernard & Goodyear, 2009; Dodge, 1982; Liddle, 1986; Loganbill, Hardy, & Delworth, 1982; Skovholt & Ronnestad, 2003; Stoltenberg & Delworth, 1987). Anxiety has been shown to affect genetic counseling supervision from both the supervisors' perspective (Lindh, McCarthy Veach, Cikanek, & LeRoy, 2003) and the students' perspective (Hendrickson et al., 2002), and it has been linked to "games" played in supervision by supervisees and supervisors (McIntosh, Dircks, Fitzpatrick, & Shuman, 2006). Thus, it is critical to further understand this phenomenon and how it affects the training of students and their delivery of clinical services. While relationships between anxiety and performance have been found in mental health fields (e.g., Barbee, Scherer, & Combs, 2003; Birk & Mahalik, 1996; Friedlander, Keller, Peca-Baker, & Olk, 1986; Hiebert, Uhlemann, Marshall, & Lee, 1998) such studies have not yet been done with genetic counselors. The present study

identified students' perceptions of the effects of anxiety on supervision in an effort to provide new avenues for research and training. .

Chapter 2: Review of Literature

Given the limited research on anxiety and supervision in the field of genetic counseling, this review begins by summarizing literature from psychology on supervisee anxiety and anxiety-proneness, supervisee counseling experience and counselor development level, and the format of supervision. While the results from the psychology literature may not translate directly into genetic counseling practice, some similarities would be expected. The review will then summarize the genetic counseling supervision and anxiety literature.

Definition of Anxiety

Spielberger, Gorsuch, Lushene, Vagg, and Jacobs (1983), developers of the State-Trait Anxiety Inventory (STAI), characterized anxiety as "subjective *feelings* [emphasis added] of tension, apprehension and worry, and by activation or arousal of the autonomic nervous system" (p. 4). Note the combination of physical ("tension," "autonomic nervous system"), emotional ("apprehension"), and cognitive ("worry") aspects which together comprise anxiety. Spielberger et al. (1983) separated the construct of anxiety into two distinct dimensions: s*tate anxiety,* (the felt experience of anxiety in the current moment described above), and *trait anxiety*, the "relatively stable individual differences in anxiety-proneness" (p. 5), or in other words, how often and how intensely one tends to experience state anxiety. They also described trait anxiety as "the probability that [state anxiety] will be experienced in the future" (p. 5).

Anxiety differs from stress, in that stress is "a relationship between the person and the environment that is *appraised* [emphasis added] by the person as relevant to his or her well-being and in which the person's resources are taxed or exceeded" (Folkman &

Lazarus, 1985, p. 152). Note this definition relates solely to a cognitive process of evaluating one's situation. Thus, stress may best be considered a necessary but not a sufficient condition for anxiety.

Timing of the experience also plays an important role in defining anxiety. Spielberger et al.'s (1983) use the words "apprehension" and "worry," which imply a future-orientation. Barlow (1988, 1991) makes the link to future events explicit in his conceptualization of anxiety, which he describes as "anxious apprehension" (1991, p. 100). Barlow uses this characteristic to distinguish between anxiety and fear, which he classifies as the response when "directly threatened with a dangerous, perhaps life-threatening event" (1991, p. 98). In other words, while anxiety relates to something which will take place in the future, fear relates to something confronting a person in the present. Yourman (2003) describes shame, in the psychodynamic tradition, as related to events which took place in the past. Specifically, shame is characterized as the failure to "live up to expectations" (p. 603). Yourman states the expectations can be internally or externally imposed, and draws heavily from Tomkins's (1962, 1963) Affect Theory in his conceptualization. Thus, anxiety may occur before some evaluation or measurement if there is concern one will not be judged positively, whereas shame takes place after the evaluation or measurement and the judgment has been confirmed. It should be noted that anxiety is not required for shame to occur (e.g., if a negative judgment takes one by surprise, one could feel shame without having been anxious).

In summary, anxiety is a complex construct which involves biological, emotional, and cognitive processes tied to some future event(s). Anxiety is conceptually distinct from stress, fear, and shame, although definition of these terms in research literature has

been inconsistent (e.g., Barlow, 1991; Jungbluth, MacFarlane, McCarthy Veach, & LeRoy, 2011).

Anxiety and Supervision in Graduate Student Psychology Trainees

Prevalence of Trainee Anxiety

Graduate education poses a wonderful opportunity and a difficult struggle for those seeking to become therapists. Kottler and Blau (1989) state most graduate student therapists are "insecure, confused, and terrified of failure" (p. 22). Riley (1976) describes anxiety as a "very common if not universal occurrence" (p. 3) in new therapists. In discussing the experience of beginning counselors, Schauer, Seymour, and Geen (1985) note "Much of the arousal exhibited in the therapeutic relationship comes in the form of anxiety" (p. 279). Numerous authors associate anxiety with the experience of being a novice therapist (e.g., Bernard & Goodyear, 2009; Costa, 1994; Dodge, 1982; Levitt, 2002; Liddle, 1986; Loganbill, Hardy, & Delworth, 1982; Reifer, 2001; Skovholt & Ronnestad, 2003; Stoltenberg & Delworth, 1987), and this association is supported empirically, primarily by qualitative studies.

Skovholt and Ronnestad (1992) conducted 60-90 minute semi-structured interviews with 100 therapists and counselors and five lay helpers living in Minnesota. The sample was stratified by experience level, with 20 participants in each of five groups: 1st year graduate students, advanced doctoral students, practitioners with approximately 5 years of postdoctoral experience, practitioners with approximately 15 years of postdoctoral experience, and practitioners with approximately 25 years of postdoctoral experience. The sample was evenly divided between men and women, and was 96% Caucasian, which the authors noted was representative of the population of therapists in

Minnesota. Interviews consisted of 23-items based on the authors' research findings, professional experiences, and professional development literature. Interviewers were conducted by the first author and four doctoral students in counseling psychology.

The research team first focused on creating a stage model of counselor development. Meeting as a group, they used a Grounded Theory approach (Strauss & Corbin, 1990) to inductively create themes which depicted the "essential concepts, subcategories, and categories" (p. 506) of the interviews. This method resulted in an 8-stage model which spanned from pre-graduate studies to preparation for retirement. To further streamline the model, each stage was described according to eight characteristics to facilitate comparisons across stages. This study used strong validation procedures, including having the initial sorting reviewed by 25% of the participants from each group, using another counseling psychology doctoral student as a data auditor, and interviewing 60% of the original sample again to determine the accuracy of stage descriptions.

Upon completion of the stage model, the research team extracted more general themes that transcended individual stages from the interviews. Of the 20 derived themes, the most applicable to the present review is Theme 10, which states "As the professional develops, there is a decline of pervasive anxiety" (p. 511). The authors identified the cultivation of expertise as a "crucial factor" (p. 512) in bring about this decline. Interestingly, the practitioners in their sample with the most experience were the individuals that identified graduate school as the most anxiety provoking, while those currently in training did not mention anxiety nearly as often (Ronnestad & Skovholt, 1993). This may have been due to the reluctance of the students sampled to admit such anxiety in an attempt to maintain a professional image or an indication of denial being

used as a coping strategy. In a reformulation of their theory (Ronnestad & Skovholt, 2003), the authors' conceptualization of anxiety remains largely unchanged. Theme 8 in their revised model states "Many Beginning Practitioners Experience Much Anxiety in Their Professional Work. Over Time, Anxiety Is Mastered by Most" (p. 32). They again identify expertise as a primary pathway to reducing anxiety. Though this phrasing implies a less widespread level of anxiety by eliminating the word "pervasive," it still speaks to the prevalence of substantial levels of anxiety among novice therapists.

Skovholt and Ronnestad's (1992) study has many methodological strengths, including the stratification of experience levels to ensure a varied sample, in-depth interviews, multiple levels of evaluating and refining the derived themes and categories, data triangulation, and testimonial validation. While a longitudinal study over the course of a professional career may be preferable to demonstrate these patterns, their cross-sectional approach contributes to understanding of anxiety across therapists' development. Qualitative data are not intended to be generalized to the population of interest. Nevertheless, representativeness of the findings is limited by use of a sample which lacks heterogeneity with respect to geographic region and ethnic diversity and consists of only doctoral-level practitioners. It is also unclear if those who have been providing psychotherapy for 30-40 years are typical in terms of their development, as many leave this role well before then. As the anxiety was reported retrospectively, it must also be considered that inaccurate or incomplete memories formed the basis of these accounts. Though this may have been caught when participants were re-interviewed, depending on the phrasing of the questions participants may have been primed to recall anxious times in graduate school. Finally, most of the graduate students were from a

single training institution, and thus their responses may be representative of program-specific variables.

Williams, Judge, Hill and Hoffman (1997) qualitatively and quantitatively analyzed the experience of students enrolled in a required counseling pre-practicum course. Their sample consisted of 7 doctoral counseling psychology students (6 female; 6 Caucasian; 3 with previous counseling experience). One additional counselor began the study, but was removed due to concerns about the research team's ability to accurately categorize the person's responses as English was the person's second language. Thirty volunteer clients (57% female, 60% Caucasian) were recruited from introductory psychology courses and received course credit for participation. Seven advanced doctoral students (5 female, 2 male; 2 African American, 2 Asian American, and 3 Caucasian; 3 with previous supervision experience) were used as supervisors. Counselors and supervisors dyads were determined based on supervisor level of experience (both as supervisor and as counselor) as well as the needs of the student counselors as determined by the third and fourth authors.

Each counselor completed between 9 and 11 sessions with clients, though the number of different clients seen by an individual counselor ranged from 2 to 7 (M = 2.27, SD = 2.02). Supervisors observed sessions via live video feed. After each session, the client, counselor, and supervisor completed open-ended questions about the session. Counselors also completed the STAI and the Counselling Self-Estimate Inventory (Larson et al., 1992) at the beginning and end of the semester. Supervisors completed the Countertransference Factors Inventory (Van Wagoner, Gelso, Hayes, & Diemer, 1991) and the Supervisor's Report (Jones, Krasner, & Howard, 1992) at the end of the semester

both as a post-test and as a retrospective pre-test. The researchers used a retrospective pre-test because the supervisors did not know the counselors well enough at the beginning of the semester to make accurate assessments.

The researchers used consensual qualitative research (CQR; Hill, Thompson, & Williams, 1997) methods to categorize open-ended responses thematically. Coding of post-session experiences revealed feelings of anxiety and discomfort were present during every session for 3 counselors, and for more than half of the sessions for the other 4 counselors. Repeated measures ANOVA revealed a significant decrease in STAI state anxiety scores at the end of the semester for counselors, and significant increases in overall therapeutic skills as assessed by supervisors and managing countertransference.

One limitation of the qualitative side of this study is the use of questionnaires rather than interviews, which precluded asking for clarification and/or elaboration. Additionally, although the authors went to great lengths to protect the anonymity of the counselors' responses (e.g., using code numbers instead of names, not beginning data analysis until after the semester ended, and having responses typed by an undergraduate research assistant before analysis), it is unknown whether participants felt comfortable enough to fully disclose their experiences.

Regarding quantitative results, statistically significant differences were found for the 7 participants, suggesting large changes over the semester (although the authors did not report effect sizes). The method used to report the STAI-state anxiety scores is confusing. The pre- and post-semester reported means were 1.94 and 1.51, respectively, for a measure which should range from 20-80. Perhaps the authors standardized the scores before reporting or reported the average item score, but they made no mention of

this in the article, nor did they mention an alternative scoring method. They also did not report trait anxiety scores at either time point, so it is unknown to what degree these students were prone to anxiety. The use of retroactive pre-tests makes the finding of increased therapeutic skill somewhat questionable as well, as it seems a direct assessment of how much the student changed would be more accurate than trying to quantify where he or she was at the beginning of the study. Finally, as no variables were manipulated, causation cannot be discerned, so the relationship between anxiety and performance remains unclear.

Daniels and Larson (2001) conducted an experimental study to determine the impact of feedback on trainees' anxiety levels. Forty-five graduate student trainees in mental health fields conducted a 10-minute mock counseling session. After the session, participants completed the state anxiety scale of the STAI (STAI-S; Spielberger et al., 1983) and the Counseling Self-Estimate (COSE; Larson et al., 1992) and were randomly assigned to receive either positive or negative feedback about their performance. The positive condition was told they scored 85/100, while the negative condition was told they scored 15/100. The participants then took the STAI-S and the COSE again to measure changes in anxiety and self-efficacy. Repeated measures ANOVAs found significant differences between groups for both variables, such that those in the positive condition reported increased self-efficacy and decreased anxiety and those in the negative condition reported the opposite effects.

This study incorporated experimental manipulation and found a moderate effect size difference in anxiety based on the type of feedback received. Several methodological issues, however, suggest caution in interpreting the results. The extreme

score differences in the positive and negative feedback positions (i.e., 85 vs. 15) do not seem realistic in terms of the feedback supervisees would actually receive in supervision. Thus the size of the effect may not generalize to more typical negative feedback situations. Additionally, feedback is typically given in an ongoing relationship, so additional variables and the shared history of the dyad are likely important factors not considered in this study. Finally, the trait anxiety of the participants was not measured. This may have added additional depth to the analyses, as Spielberger and colleagues (1983) put forth that those with higher trait anxiety are generally more threatened by evaluations, especially in an interpersonal context.

El-Ghoroury, Galper, Sawaqdeh, and Bufka (2012) conducted an online survey of graduates in psychology to assess stress, coping, and barriers to wellness. Citing a paucity of research on graduate student stress levels, the authors surveyed 387 current members of the American Psychological Association of Graduate Students (APAGS) to better understand the experience of psychologists in training. Invitations to an online survey were sent to 2,945 randomly selected members of APAGS (estimated total membership ~45,000), resulting in a usable response rate of 14.9% (not including 301 emails which were "undeliverable"). The sample was 78% female, 71% Caucasian, and had a mean age of 32 years, all of which were representative of the overall APAGS membership.

Participants completed a modified version of a survey developed for professional psychologists by the Advisory Committee on Colleague Assistance (ACCA) of the American Psychological Association (APA) in order to compare the results to previous research (Bridgeman & Galper, 2010). The stress scale had demonstrated good internal

consistency reliability (coefficient alpha = .85) in a survey of 658 psychologists randomly sampled from the APA membership database (Bridgeman & Galper, 2010). The stress scale consisted of 22 Likert-scale items with the following prompt: "Since starting graduate school, how much has your functioning been disrupted by each of the following." Participants were then asked to rate each stressor on a 5-point scale (*0 = None, 1 = Minimally, 2 = Moderately, 3 = Significantly, 4 = Severely*). The internal consistency for the El-Ghoroury et al. study was 0.77.

Anxiety was tied with academic or coursework responsibilities and finances or debt as the stressors with the highest mean severity rating (1.9, *SD* = 1.0), which corresponded to moderate severity. Anxiety was also the third most prevalent stressor reported by the participants in this study, with 60.7% of the sample considering anxiety to have impaired their optimal functioning during their graduate school experience.

Strengths of this study include collection of data from a nationwide randomized sample and established important baseline data for comparisons. While the response rate was only ~15%, the respondents were quite similar demographically to the overall APAGS membership which is encouraging in terms of generalizability. The potential for response bias is still possible, as those who chose to answer the survey may vary in important, but non-demographic, ways from those who completed surveys. This study also sampled only from APAGS members, who may be different than students who choose not to join the professional organization. While the internal consistency coefficient for this study was adequate and the rationale for building on a previous study was sound, limited additional psychometric information about the survey instruments was

provided. For instance, there was no mention of validity coefficients, thus making it difficult to assess how meaningful the results of the quantitative portions really are.

Summary. These studies demonstrate empirical support for the amount of anxiety experienced by graduate student therapists-in-training. While the support is primarily qualitative, that anxiety was found to be widespread in multiple studies, giving some credibility to the generalization of results. Initial quantitative research also seems to support the idea of anxiety being common among graduate student trainees. Nevertheless, further quantitative studies are needed before more definitive statements about the prevalence of anxiety can be made. It should also be noted those entering similar fields seem to have comparable experiences. For example, Hales and Borus (1986) described the beginning stage of psychiatric residency as a time of anxiety, depression, and psychosomatic issues. Numerous studies of medical students have shown high levels of anxiety (e.g., Hajek, Hajberg, & Cushing, 2000; Jiang et al., 2003; Sarikaya, Cinaver, & Kalaca, 2006; Stewart, Lam, Betson, Wong, & Wong, 1999), though many use international samples and therefore may not be representative of American students.

Effects of Trainee Anxiety on Supervision

Some scholars frame working with anxious students in a positive light. Rubin (1989), for example, speaks of anxiety as a key opportunity for "critical" supervision relationships (p. 395), which he defines as those relationships that promote deep personal understanding and learning. Much more frequently, however, researchers have focused on the negative ramifications of anxiety vis-a-vis supervision.

Birk and Mahalik (1996) surveyed 29 master's level counseling students recruited from courses during their 1st year at a large eastern university to determine the roles of anxiety, level of cognitive complexity, and evaluative or non-evaluative supervision on counselor development level. The counselor sample was predominantly female (83%) and Caucasian (86%), with a mean of 0.97 years (*SD* = 2.12) of counseling experience prior to entering the program. Advanced doctoral students (*n* = 19; 79% female) and faculty (*n* = 2; 1 female, 1 male) served as supervisors. The supervisors averaged 1.74 years (*SD* = 3.02) of supervision experience, and about three-fourths were Caucasian. Undergraduate volunteers from education classes who wanted to discuss a personal issue with a counselor participated as clients.

Prior to seeing clients, each counselor completed the Paragraph Completion Method (PCM; Hunt, Butler, Noy, & Rosser, 1978), a measure of cognitive complexity, and a median split was used to create high and low level groups. The split resulted in the high level group having scores associated with the highest level of cognitive complexity and the low level group having moderate to low levels of cognitive complexity according to the test norms. Each counselor saw only one client for three times and received a weekly supervision session with a supervisor, either as part of a course requirement for which a grade was assigned (evaluative condition) or independent of course requirements (non-evaluative condition). The counselors completed the STAI (Spielberger et al., 1983) and Ossana's (1990) Supervisee Description Scale-Trainee (SDS-T) and Supervision Environment Questionnaire-Trainee (SEQ-T) after the conclusion of the third supervision meeting. Supervisors completed Ossana's (1990) Supervisee Description Scale-Supervisor (SDS-S) and Supervision Environment Questionnaire-

Supervisor (SEQ-S) after the third supervision session. Separate 2 (supervision condition) x 2 (cognitive complexity level) MANCOVAs, with state anxiety and supervisor experience as covariates, were conducted on the beginning and advanced development scores, though it is unclear from the text of the article how this distinction was made or to what it refers. The results showed a significant effect for anxiety, such that more anxious students rated themselves as having less advanced developmental level behaviors, but no other significant effects. Supervisor ratings of developmental level showed no effect for counselor anxiety.

The results of this study suggest supervisors would perceive anxious supervisees to be working at higher developmental levels than the students' themselves perceived. This might lead to supervisor expectations being higher than supervisees feel is appropriate and create even more anxiety for the supervisee. Several methodological concerns and omissions in reporting, however, suggest tentative interpretation of the findings. While the authors incorporated the varied amount of supervisor experience into their analysis, they did not account for the fact that some supervisors had more than one supervisee (range: 1-4). The authors also did not report the participants' actual STAI scores, only providing the unstandardized beta weight for state anxiety, thus making effect size calculations impossible. Additionally, though the authors conducted and reported the results for two MANCOVAs, they do not explain their reasoning for separating results into advanced and beginning levels. The significance of results varied by analysis, but the authors discussed findings without differentiating between the two. Therefore, results should be considered highly tentative.

Taylor (1991) surveyed 37 beginning (defined as 0-1 completed semesters of practicum) and 81 advanced (2+ completed semesters of practicum and pre-internship) trainees from APA accredited counseling psychology doctoral programs to investigate the relationship between experience level and preference for directiveness in supervision. The beginning and advanced samples were primarily female (76% and 70%, respectively) and Caucasian (89% and 90%, respectively). The survey achieved an initial response rate of 57.5%. Sixteen participants were removed before conducting analyses because of "missing data or unintelligible responses" (p. 41). Those with more than 2 years of non-practicum experience in counseling related areas (e.g., telephone crisis counseling, working in group home) were also excluded from analysis (n = 45), for usable response rates of 38.5% for the beginning group and 37.8% for the advanced group.

Participants completed the Counseling Development Questionnaire (Reising & Daniels, 1983), the Therapeutic Reactance Scale (Dowd, Milne, & Wise, 1991), and the Counseling Situations Questionnaire (CSQ). The CSQ, created for the study, contains 12 brief client scenarios and 5-items per scenario to assess the amount of directiveness the trainee would prefer in supervision for the client and 1-item to assess the anxiety level the trainee would feel working with the client. All items used a 7-point Likert scale. The CSQ demonstrated adequate test-retest and internal consistency reliability for directiveness (.80 and .82, respectively) and excellent test-retest reliability for anxiety (.92) in pilot testing. Univariate ANOVAs with $\alpha = .01$ (to protect against Type I errors) determined that while the beginning group had a lower CSQ anxiety score overall, only one of the 12 scenarios had a significant difference. The authors do not provide a

description of the significant scenario, but based on the mean anxiety levels reported (2.28 for beginners, 1.79 for advanced) it was a low-anxiety situation.

The authors do not discuss this result, and while *p*-values are not reported, using the summary statistics provided there were several more scenarios which approached significance ($p < .15$). Regardless of experience level, participants reported a preference for more directive supervision as their anxiety increased. This finding suggests supervisors may need to respond differently to supervisees experiencing anxiety and be aware of this dynamic throughout training, not just at early developmental stages.

Caution is recommended when interpreting these results. First, with the unequal group sizes, the study would only have enough power to detect effect sizes of .64 or higher with a power of .80, which corresponds to moderate-to-large effects using Cohen's (1988) conventions. This assumes, however, an $\alpha = .01$, which is quite liberal considering 12 tests were conducted. If a Bonferroni adjustment were used, for example, the study would only be able to detect effect sizes of .74 with a power of .80. Second, the observed effect size between the beginning and advanced group on overall anxiety was .39, indicating only a small-to-moderate effect (Cohen, 1988), meaning the difference between beginning and advanced students may not be practically significant. Finally, the low usable response rate, use of a single item to assess anxiety, and hypothetical nature of the responses call into question validity and generalizability of the results.

Summary. Though the studies discussed in this section need to be replicated and extended before drawing definitive conclusions, the findings provide initial evidence that students' anxiety may affect the way they come to supervision. Specifically, trainee self-

perceptions and expectations of supervision may require particular attention by the supervisor.

Effects of Trainee Anxiety on Counseling Performance

Several researchers have studied the effects of anxiety on the process of providing counseling and psychotherapy. Early discussions of the connection between anxiety and performance in general centered on Yerkes and Dodson's proposed "U"-shaped relationship (1908, as cited in Bernard & Goodyear, 2009). Yerkes and Dodson hypothesized that some anxiety is necessary for peak performance, but too little or too much decreases performance. In the absence of sufficient anxiety, a person would lack the motivation to prepare adequately, but as anxiety increases past a person's capacity to cope, it becomes debilitating. Some empirical support for this hypothesis has been found in other fields (e.g., LeBlanc & Bandiera, 2007; Meijer, 2001), but optimal anxiety levels have not been determined, and likely depend heavily on individual and situational differences.

Schauer, Seymour, and Geen (1985) reviewed counselor effectiveness literature of the 1960s and 1970s and concluded "It is evident that anxiety frequently reduces the effectiveness of counseling behaviors, particularly among beginning counselors" (p. 280). Much of this research focused on the communication skills and influence of the counselor. Specifically, Schauer and his colleagues identified studies which had shown counselor anxiety to disrupt the flow of speech, reduce accuracy in perceptions of the client, reduce the ability to remember the words and emotions expressed by the client in session, and elicit argumentative or "over-elaborative" (p. 280) behavior. The authors proposed using Zanjonc's (1965) hypothesis from social facilitation theory to explain the

effect of anxiety on counselor performance. Zanjonc's hypothesis states the presence of others increases the drive of an individual to perform, which in turn promotes the use of behavior or responses with which the individual has more experience and lessens the likelihood of responses which have not been practiced as extensively.

Schauer et al. proposed observation of a novice trainee's counseling skills, especially by someone in an evaluative role (i.e., a supervisor), would lead trainees to exhibit more inappropriate behaviors in sessions, such as giving advice, talking excessively, or chatting, because they would not have practiced effective counseling skills sufficiently. More experienced trainees, however, should have more practice with effective counseling techniques and therefore would be expected to exhibit fewer inappropriate behaviors.

These authors summarized findings of other researchers in related areas and outlined a methodology for empirical testing, but they did not conduct an original study in support of their proposed theory. It does not appear that any such study was conducted by these researchers or others, or at least it was not published. Without empirical evidence directly testing the theory with counselors, it is impossible to evaluate the claims made, but the authors do present a strong rationale based on established theory.

In empirical literature spanning over 50 years (e.g., Bandura, 1956), counselor anxiety has been shown to diminish performance. Friedlander et al. (1986) investigated the relationship between role conflict, anxiety, performance, and self-talk for 52 graduate students (57% female) in counselor education, counseling psychology, clinical psychology and social work recruited from a northeastern state university. Participants reviewed a case file involving a clinical dilemma and provided an opinion. Next each

participant received a written recommendation from a supervisor which corresponded to one of four conditions. The conflict condition group received a recommendation to do the opposite of what the student suggested. The no-conflict condition group received a recommendation which supported their suggestions. The neutral condition group received a recommendation which said their suggestion and the opposite were equally valid. The control group did not receive a message from a supervisor. Participants then completed the Self-Efficacy Inventory (Friedlander & Snyder, 1983), the State-Trait Anxiety Inventory (Spielberger et al., 1983), a thought-listing procedure (Cacioppo & Petty, 1981), and tape recorded their plans for the first session with the client.

Trainee performance was scored based on whether their plan included 5 elements derived from unanimous endorsement of 6 professional counselors: client's feelings about starting with a new counselor, treatment goals, client's current mental status, and two issues related to the dilemma. Participants received 2 points for explicitly mentioning each element, 1 point for references to the element, and 0 points if the element was omitted. While a MANCOVA was not significant for experimental condition, anxiety was correlated with performance (r = -.37) and self-efficacy (r = -.34).

This study established an inverse relationship between anxiety and performance in a case conceptualization and session planning activity. The definition of performance, however, needs to be considered further. Participants only had 5 minutes to complete their plan for the next session, so speed may confound the results. It is unclear to what extent the ability to comprehensively plan a session in 5 minutes is necessary for successful counseling. Also, participants were told they would be meeting with the client for 10 minutes but to plan a 50 minute session. Some participants may have decided to

focus only on what could be accomplished in 10 minutes. Finally, extent to which anxiety affects actual counseling skills was not assessed in this study.

Hiebert, Uhlemann, Marshall and Lee (1998) surveyed 95 first semester graduate counseling students (68% female, 100% Caucasian) enrolled in a pre-practicum course. They studied the relationship between self-talk, anxiety, and counseling performance among participants recruited from two training programs in western Canada over the course of 3 years. Each participant completed the state portion of the STAI (Spielberger et al., 1983) and the Counsellor Self-Talk Scale (Uhlemann, Lee, & Hiebert, 1988) at the beginning and end of the semester and prepared a 20-minute videotape demonstrating counseling skills in practice as part of the course requirements. The course instructors evaluated the tapes and rated the students' performance based on four criteria: appropriate use of micro-skills, nonverbal behavior, degree of empathy, and ability to stay focused.

A MANOVA found significant differences for time and training program, such that negative self-talk decreased, positive self-talk increased, and students from one program had more negative self-talk than students from the other program. State anxiety was significantly correlated with negative self-talk at both pre- and post-test (r = .57 and .36, respectively), positive self-talk at pre-test (r = -.25), and taped performance (r = -.20).

It is important, however, to consider the magnitude of the relationship, as a correlation of -.20 means only 4% of the variance in performance can be attributed to anxiety. Furthermore, no causality can be assumed. Also, use of the course instructors to rate performance without corroboration raises concerns about the assessment of skills in

this study, therefore calling validity into question. As students may have completed several versions of their tape while reviewing and improving performance each time and/or used scripted responses with their partners, it is unclear the extent to which their performance reflects actual counseling skill. Nevertheless, this study does tentatively support a link between anxiety and performance of graduate student counselors and identifies a potential area for intervention.

Hiebert et al.'s (1998) results are also consistent with those of Nutt-Williams and Hill (1996), who found negative self-talk and increased self-focus interacted to predict lower self-ratings of helpfulness by therapists-in-training. This study only included 31 participants, but each participant rated approximately 20 instances of self-talk during a session with a client. A thought-listing procedure based on the work of Cacioppo and Petty (1981) was used to generate a list of self-talk messages to be analyzed by each participant. The participant then rated the affect of the thought (i.e., positive vs. negative), the helpfulness of their interventions, and their perceptions of how clients perceived the intervention. Participants also completed the Working Alliance Inventory – Short Form (WAI-S; Tracey & Kokotovic, 1989) for the client for use as a statistical control. While significant effects were found, the proportion of variance in perceived helpfulness was quite low (R^2 = .09), so the practical impact of negative self-talk may not be particularly large.

Preliminary evidence has also linked anxiety to self-efficacy. This is important, as self-efficacy has been linked to level of counselor development in a number of studies (e.g., Leach, Stoltenberg, McNeil, & Eichenfield, 1997; Melchert, Hays, Wiljanen, & Kolocek, 1996). Barbee, Scherer, and Combs (2003) surveyed 113 pre-practicum

counseling students (75% female, 58% Caucasian) from two universities to determine the effect of service-learning participation on self-efficacy and anxiety levels. Participants completed the STAI (Spielberger et al., 1983) as well as the Counselor Self-Efficacy Scale (Melchert et al., 1996). The mean STAI score was 32.44, which is low compared to college students (Spielberger et al., 1983), but the range was 20-69, indicating some students were experiencing very high levels of anxiety. Anxiety also correlated negatively to self-efficacy (r = -.298). A multiple regression analysis, however, using self-efficacy as the outcome variable did not include anxiety, so it is unclear if this relationship would persist in the presence of other variables. While further replication is needed, these findings provide another avenue to explore regarding the impact of trainees' anxiety on their clinical performance.

Anxiety may also have indirect effects on counselor performance via the ability of the counselor to be self-aware during session. Williams (2008) summarized 10 years of qualitative and quantitative research into therapist self-awareness and found contradictory results. Early research into self-awareness suggested negative effects. As described above, Williams et al. (1997) followed seven prepracticum trainees in a doctoral counseling program across a semester. Qualitative analysis of the trainees' experiences revealed anxiety and disengagement with clients (e.g., being self-focused) were the most common categories in the Feelings and Reactions domain, though the majority of trainees also reported feeling empathic and comfortable. The participants' supervisors also perceived the majority of them as having difficulty managing their feelings and reactions in session. Williams (2003) conducted an Interpersonal Process Recall (Kagan & Kagan, 1990) study with nine beginning therapists-in-training and 18 volunteer clients. She

found the more anxious the therapist-in-training was before the session, as measured by the STAI (Spielberger et al., 1983), the more self-focused they were during session. Therapists' ratings of their degree of self-focus were negatively related to their clients' perceptions of the helpfulness of the therapist, which supports previous research (e.g., Hiebert et al., 1998; Nutt-Williams & Hill, 1996).

More recent research, however, has found positive effects of therapist self-awareness. For example, Williams and Fauth (2005) found therapists (the sample included both licensed therapists and advanced graduate students) rated their self-awareness during a session with a volunteer client as generally helpful. Participants also tended to report more positive interpersonal experiences with clients as self-awareness increased. Client ratings of therapists' helpfulness also tended to increase as self-awareness increased. Fauth and Williams (2005) found the same results in a sample comprised solely of therapists-in-training.

Williams (2008) suggests methodological choices may explain the differences in results. After the Williams (2003) study, she began asking participants about the affective valence of their self-focus (i.e., positive or negative) in addition to utility (i.e., helpful vs. distracting). Williams and Fauth (2005) further suggest that it may be the management of self-focused thoughts rather than the thoughts themselves which is useful. Williams (2008) also recommended the exploration of mindfulness strategies (e.g., Kabat-Zinn, 1994) to reduce distracting self-focus. As the tenets of mindfulness are focused, purposeful attention and non-judgmental awareness, this may be a rich area for further research.

Summary. While caution is needed due to concerns with how performance has been defined and assessed, this preliminary evidence suggests counselors' anxiety may negatively impact counselor performance and therefore ultimately affect the quality of services provided to clients. Replication and improved measures of performance are needed to fully explore this relationship and understand how counselor anxiety affects clients' experiences.

Supervision-Specific Anxiety of Graduate Student Trainees

Prevalence of Supervision-Specific Anxiety

In addition to general anxiety levels reported by graduate student trainees, supervision seems to be a particularly anxiety-provoking experience. In the supervision literature, a substantial level of anxiety among supervisees is widely presumed (e.g., Bernard & Goodyear, 2009; Borders, 2009; Reifer, 2001; Ronnestad & Skovholt, 1993). Indeed, anxiety has been called "a fact of life for the supervisee" (Bernard & Goodyear, 2009, p. 178). Awareness of the salience of supervisee anxiety has led to increased attention in the supervision literature. For instance, some approaches to supervision have been "built on the containment of unconscious anxieties" (Ungar & de Ahumada, 2001, p. 71), and some authors call the management of anxiety "a central organizing dynamic" (Frantz, 1992, p. 30).

The prevalence of trainee anxiety, however, is based largely on theory, and studies have yielded mixed empirical support. It should be noted, however, that empirical studies have methodological issues which call their results into question. Singh (2000), for example, had 298 participants (51% doctoral students, 46% master's students, and 3% doctoral psychologists) complete the STAI (Spielberger et al., 1983) just before a

supervision session and found average levels of state anxiety [*M* = 36.65, *SD* = 11.81; norms for working adults: *M* = 35.72, *SD* = 10.40 (Spielberger et al., 1983)]. In a cross validation study of Singh (2000), Tosado (2004) found higher levels of state anxiety (*M* = 43.62, *SD* = 14). These studies had a relatively small response rate (the authors do not specify the number of surveys sent due to electronic distribution via listservs, but Singh, 2000, estimated it to be in the thousands) which raises concerns about self-selection effects, as those who were the most anxious may be less inclined to respond. Additionally, there was no standardization of how soon before the supervision session the measure was completed, and the range of state anxiety scores in Singh's (2000) sample was 20-70, indicating some participants were experiencing high levels of state anxiety. Demographic differences in race, highest degree earned, field of study, and supervisor's gender also exist between the samples, raising questions about generalizability of the results from one to the other. Finally, while each included a measure of social desirability, Tosado (2004) used a measure with stronger psychometric properties (Balanced Inventory of Desirable Reporting; Paulus, 1984). She found her sample endorsed a high level of social desirability (though it was within the normal range for college students).

While the evidence is inconclusive about the level of anxiety leading up to supervision, some preliminary evidence suggests anxiety may be frequently experienced during supervision sessions. James, Allen, and Collerton (2004) analyzed four supervision sessions between a 3rd year clinical psychology doctoral student (the second author), and her supervisor (the first author). These sessions took place after each of the supervisee's neuropsychological assessment sessions with a client recovering from a

stroke. The supervisee had "limited experience" (p. 508) with this type of assessment and had not previously worked with a stroke victim. The supervisor had 6.5 years of experience working with this population. After each supervision session, the supervisee and supervisor independently viewed a video recording of the session and narrated, via audiotape, their internal experiences, which the supervisee took to mean emotional state (although this was not directly intended by the researchers). One of the videotapes, selected randomly, was also viewed by a consultant with 15 years of experience with this population, to assess the quality of the supervision.

Qualitative analysis of the supervisee's experience in the four sessions revealed anxiety was the most frequent emotion across the sessions, and it was either the most or second most frequent emotion in each session. The frequency of anxiety was also fairly stable from session to session. Other emotions endorsed by the supervisee were: containment (a British term which seems comparable to *secure*, *calm*, or *controlled*), pride, relief, shame, confusion, interest, and anger. Comparisons of the supervisee's and supervisor's narrations showed the supervisor was often aware of the student's anxiety and sought to use it to facilitate learning.

Caution must be applied to the results, however, before making generalizations. Most notably, this is only one student's experience and it took place in the UK, so the setting must be considered. Methodological issues also raise concerns. While both participants viewed a videotape of the supervision session, it was unclear whether they each had a copy or whether the same tape was used. If the same tape were used and they had to watch it separately, then necessarily one had to view it at a later time than the other, which may have led to differential ability to recall emotions accurately. Similarly,

the article does not specify how soon after the assessment sessions the supervision occurred, or how soon after supervision the tapes were viewed, each of which could affect accuracy. This study also used a simple count of the times anxiety was experienced without a measure of intensity, so it is unknown how much of an effect the anxiety really had on the participant. A final caution comes from the "idiosyncratic…use of slang and colloquiums" (p. 509) used by the supervisee in describing her emotions, which prevented a reliability check. This study does demonstrate, however, the range of emotions experienced by a supervisee in what is likely an anxiety provoking situation, working with a new population on an assessment one is still learning, and it included a review of the quality of supervision by a neutral observer. Both of these factors comprise significant strengths.

Summary. These studies illustrate that while anxiety is commonly assumed to be substantial for supervisees, the empirical evidence is mixed. This may be in part due to supervisees withholding disclosure of their anxiety or denying it in order to appear competent, as suggested by Ronnestad and Skovholt (1993). This is an issue for researchers seeking to measure anxiety, as current students may underreport, while measuring anxiety retrospectively poses the risk of mistaken recollections.

Description of Supervision-Specific Anxiety

A number of theorists have proposed potential reasons supervision is so anxiety provoking for supervisees. For example, based on a review of supervision literature, Liddle (1986) outlines five threats: evaluation anxiety (the supervisee fears an external appraisal of performance and ability), performance anxiety (the supervisee fears not meeting internally set standards of performance and ability), supervisee personal issues

(e.g., difficulty with authority, unprocessed grief over the death of a relative), deficits in the supervisory relationship (such that the supervisee does not feel safe, understood, and/or respected), and anticipated consequences (e.g., fearing "punishment" from a client and/or supervisor for mistakes). Costa (1994) also reviewed the literature and proposes factors contributing to anxiety: exposing one's inadequacies, competition with peers, resentment of taking on the learner role, the challenge of learning different theoretical orientations, and initial awkwardness in using techniques.

While theoretical accounts of the sources of supervision anxiety are useful, empirical support is limited because these factors often lack sufficient detail to allow consistent operational definitions (Singh, 2000). Ellis et al. (1993) sought to test the construct validity of Liddle's (1986) categorization of anxiety in supervision into evaluation and performance based anxiety by creating the Supervisory Anxiety Scale (SAS). They were unable to support either a one or two factor model, as fit indices for the confirmatory factor analyses (CFAs) were too low. Singh (2000) modified the SAS to create the Anticipatory Supervision Anxiety Scale (ASAS), based on Barlow's (1988, 1991) distinction between fear (which relates to present danger) and anxiety (which relates to a perceived lack of control over future-oriented events coupled with problematic shifts in attention). Singh (2000) found moderate fit indices for CFAs on both one and two factor models using a sample of 298 supervisees, but in the two factor case the factors were highly correlated (r = .79), calling into question their distinctiveness. Tosado (2004) sought to cross-validate these findings with a sample of 288 graduate student supervisees. This sample was more racially diverse than Singh's (2000), having only 65% Caucasian students compared to 80%, and was also statistically

significantly different in terms of highest degree achieved, field of study, and supervisor's gender. Tosado found similar results to Singh, with both the one and two factor having moderately sized fit indices and the two factors being highly correlated (r = .85); thus she concluded the one factor solution was more appropriate based on parsimony.

Through this progression of studies, a scale was developed which has demonstrated excellent internal consistency estimates ($\alpha > .93$) and items were removed which correlated highly with a social desirability measure. Some concerns remain, however, with respect to construct validity. In Singh's (2000) study, for example, the CFAs were conducted with a sample size of 298. Depending on the standard for sample size recommendations used, this could be seen as a good size because it nearly reached 300 (e.g., Comfrey & Lee, 1992) or as severely underpowered (e.g., Everitt, 1975) because the participant to item ratio (298 participants: 64 items) was well below the recommended 10:1. Additionally, having used only a single method of assessing the construct validity (self-report) the common method variance may be inflating estimates of construct validity.

Other studies have sought to examine anxiety through qualitative investigation. Christensen and Kline (2001) interviewed six doctoral students who met weekly for a 3 hour group supervision session to discuss facilitating process groups of first semester master's students. The authors used grounded theory to identify five themes in their responses concerning their experience of group supervision: affective reactions, conceptual processes, behavioral choices, supervision group development, and outcomes of coping with anxiety. Affective reactions included statements such as "group

supervision is painful" (p. 388) and some participants described mixed emotions such as feeling "anxious and excited" (p. 388), but they also noted their reactions could be used as motivation for growth. Conceptual processes reflected how the supervisees perceived evaluation and risk. One supervisee noted "fear of being judged by myself and others" (p. 388) and another found the process "inherently threatening" (p.389). Effects on behavioral choices depended on by whether the supervisee focused on the costs or the benefits of supervision. One supervisee who found the costs too high stated "sometimes it is just too risky to say anything, so I don't…", while another highlighted the reward by saying "[it is] risky, but worth it for me because I grow and learn a lot more when I risk" (p. 390). The supervisees reported feeling less anxious as the group progressed, for example, "I have grown to trust my peers and the group supervisor more" (p. 390) and "I realized I had a choice. I actually stayed open and heard the feedback and got something specific that I can work with" (p. 390). At the conclusion of their experience supervisees identified a greater understanding of group process, enhanced self-awareness, and improved communication skills as benefits of coping with their anxiety. The credibility of the findings is strong, as the supervisees were interviewed multiple times individually then met together as a focus group to do a peer debriefing session (Lincoln & Guba, 1985) to confirm the findings represented their experiences.

Summary. Literature reviewed in this section demonstrates that the anxiety experience of supervisees is still not well understood. Despite numerous hypothesized reasons for supervisee anxiety, attempts to empirically validate these hypotheses have yielded mixed results. Qualitative findings are more consistent with theory, but quantitative efforts to create measurement scales have yielded equivocal results.

Effects of Live Supervision on Anxiety

While operational definitions have varied, live supervision is most often considered the direct observation of a clinical session by the supervisor who has the ability to intervene (Bernard & Goodyear, 2009). This type of supervision dates back to the 1960s, is commonly used in the fields of family therapy and genetic counseling, and has been increasingly used in other fields (Bernard & Goodyear, 2009). Live methods include bug-in-the-ear (BITE), where the supervisee wears an earpiece so the supervisor can communicate directly and subtly; walk- or phone-in, where the supervisor observes the session and can intervene by entering the room or calling the supervisee; and in vivo, where the supervisor is physically in the room during sessions and consults with/corrects the supervisee as needed. Some variations of live supervision include scheduled pauses for supervisor and supervisee to confer, while others only include spontaneous supervisor intervention if the supervisor deems it necessary or the supervisee asks for assistance.

Live supervision has been hypothesized to be particularly anxiety provoking for supervisees for numerous reasons, including increased vulnerability, direct experiencing of mistakes by the supervisor, and the distraction posed by the supervisor's presence (e.g., Bernard & Goodyear, 2009; Dodge, 1982). Research support of this proposition is inconsistent, however, and may be due to the variety of operational definitions used. Singh (2000) found the focus of the upcoming supervision session was significantly related to the amount of anticipatory anxiety measured by the ASAS, with those expecting a "more ego threatening supervision" (p. 47), a term which included live supervision, reporting higher levels. The shrunken effect size, however, was only .09, indicating only 9% of variance was shared.

Mauzey, Harris, and Trusty (2001) compared anxiety levels of supervisees who received delayed (meaning taped sessions viewed in supervision), phone-in, and bug-in-the-ear (BITE) supervision. The sample consisted of 65 master's students recruited over 2 years from a single department. The participants were enrolled in either a pre-practicum course (68%) or other introductory classes (32%), were largely female (69%) and in community counseling (63%). Racial demographics were not reported. The supervisees completed a role-play session after being randomly assigned to one of the three supervision conditions. In the BITE and phone-in groups, two interventions were made by the supervisor during the role-play session. Anxiety was measured by the STAI 1 week before the session, and just prior to and immediately after the session. A repeated measures MANCOVA (supervisee anger was also assessed in this study) with trait anxiety as the covariate found a significant effect for trait anxiety, but no main effects for time and no significant interaction.

The authors concluded their results "do not support conclusions that counseling sessions cause anxiety for [counselors in training]" (p. 117), though they acknowledge their sample came from a single program and the reported anxiety levels were "below published norms" (p. 117) indicating the possibility of underreporting, denial, or a response set. The authors did not discuss, however, the fact that the participants were engaged in role-play sessions for the purpose of a study rather than actual supervision with real clients, calling into question the applicability of their conclusion to practice settings. As many of these students were enrolled in a pre-practicum course, they had likely completed role-plays before and therefore "practice effects" may have lowered their level of anxiety. Additionally, the authors did not report results for the main effect

of type of supervision, do not account for this effect in their hypotheses, and do not provide enough summary statistics to rerun their analyses. Visual inspection of plotted means suggests the result may be significant, with the BITE group reporting the highest mean anxiety, followed by the phone-in group, then the delayed group. It is unclear why these results are not discussed or if the analysis was even conducted. Finally, while the authors reported the effect for time was not significant, they only tested Time 1 versus Time 2, and the combined Time 1 and Time 2 versus Time 3. Time 2 and Time 3 were not compared directly; visual inspection again suggests this contrast may be significant, but no explanation is given for this decision.

Ellis, Krengel, and Beck (2002) reported two studies which sought to reconcile the previously inconsistent research on the use of taping and direct observation in supervision and supervisee anxiety. They applied self-focused attribution theory (e.g., Buss, 1980; Carver & Scheier, 1982, 1986, 1991) and increased the rigor of their design relative to previous studies. In the first study, they randomly assigned 71 counseling trainees (70% female, racial demographics not reported) to one of three conditions: told the session would be videotaped and viewed afterward with a supervisor (public self-awareness condition), told the session would be done in the presence of a large mirror while audiotaped and listened to afterward with a supervisor (private self-awareness condition), or instructed to focus "as empathically as possible on the client" with no mention of supervision afterward (subjective awareness condition). Supervisees were told the client was an actual client, but she was in fact a confederate playing a role. The participants were given a one page basic information sheet about the client (demographics and presenting issue) before conducting a 30-minute session. Participants

completed the STAI upon completion of the session and they were debriefed about the deception. A MANOVA revealed no significant differences in supervisee anxiety or performance based on conditions. The authors speculated that amount of clinical experience and anxiety due to being in an experiment may have confounded the anxiety felt due to conditions, the counseling case was not challenging enough, and/or by not actually conducting the supervision the anxiety did not manifest fully.

In a follow-up study Ellis et al. sought to address these issues. They used the same procedure except with a more challenging client issue, included a pre-test of the STAI so initial anxiety could be included as a covariate, and included a supervision session. Amount of clinical experience was also included as an independent variable. Their sample consisted of 81 counselor trainees (70% female, racial demographics not included). They again found no significant differences in anxiety based on awareness condition or participant experience. For both studies the researchers used *a priori* power analyses to target sample sizes which would achieve a power of .80 for large effect sizes and included strong methodological components such as randomization, pilot studies, manipulation checks, and measurement instruments with adequate psychometric properties. While these findings suggest self-focused attribution theory does not adequately explain the anxiety around supervision, these researchers used a delayed form of supervision (i.e., the review of taped sessions), which many would not consider live supervision, thereby calling into question the applicability of their results.

Summary. Findings of the studies reviewed in this section do not consistently support the theorized experience of supervisees, but methodological and

operationalization concerns suggest caution in drawing definitive conclusions about the findings.

Effects of Supervision-Specific Anxiety on Supervision

The effects of supervisee anxiety on supervision itself are most commonly discussed in literature on supervisee resistance. Numerous scholars have labeled anxiety as the primary cause of supervisee resistance and linked anxiety to decreased ability to focus, learn, and improve, as well as a tendency to distort reality, engage in power struggles, and conceal problems (e.g., Bradley & Gould, 1994; Dodge, 1982; Liddle, 1986). Some empirical support for these theorized relationships has been demonstrated in recent years.

Enyedy et al. (2003) surveyed 49 graduate students from 13 counseling and clinical psychology graduate programs accredited by the American Psychological Association. Programs were chosen deliberately to represent all regions of the country. Training directors at each program received 10 survey packets and were asked to distribute them to students that engaged in group supervision in the previous year. While the authors did not estimate a response rate, they noted that responses were received from all 13 programs. The sample was predominantly female (71%) and included PhD students (51%), terminal master's students (39%), and PsyD students (8%). Their supervision groups ranged in size from 2-11 members (M = 5, Mdn = 6). Participants were asked to reflect on their current or most recent group supervision experience and describe aspects which *hindered them*, defined as "functioning was somehow negatively affected by this event or process" (p. 313). The authors removed duplicate statements and reworded some for clarity and brevity, resulting in 61 different hindering phenomena.

These 61 phenomena were then mailed to a subset of the original sample who volunteered to act as "sorters" (p. 313) in exchange for entry into a drawing for $75 cash. Twenty-nine participants volunteered for this role, and 14 of these volunteers were randomly selected. The sorters were demographically similar to the original sample except for a higher percentage of females (79%). The sorters' task was to classify the 61 phenomena into conceptually similar groupings. The authors tallied how often each phenomenon was included in a group with each other phenomenon and then performed a hierarchical cluster analysis on the resulting data. Five clusters were identified: between-member problems, problems with supervisors, supervisee anxiety and other perceived negative emotions, logistical constraints, and poor group time management. Statements related to anxiety included "Anxiety was high when peers were hearing your tape," "Fear of negative evaluations from my supervisor," "Feeling unsafe," "I felt pressured to self-disclose," and "Sometimes it was difficult to process feedback because of anxiety" (p. 314).

The authors concluded anxiety hindered supervisees' learning, but they interpreted the results as due to situational factors such as "the context of the group itself, behaviors by other group members, or behaviors by the supervisor" (p. 315). They proceeded to discuss individual differences, supervisee developmental level, and stage of the group as potential moderating factors, as opposed to supervision itself being anxiety-provoking. These findings are similar to those of Christensen and Kline (2001) who found supervisees experienced more difficulty engaging in group supervision because of anxiety. One strength of Enyedy et al.'s (2003) study is the use of multiple raters and empirical analysis to support groupings. It would have been informative, however, to

also report frequencies with which hindering phenomena were reported by the original sample. The authors referenced removing duplicate statements, yet did not provide information about the scope of this process, thereby missing an opportunity to shed light on the perceived prevalence of these issues.

Mehr, Ladany, and Caskie (2010) surveyed 204 therapists in training regarding the impact of anxiety and supervisory working alliance on their nondisclosure and willingness to disclose. The sample consisted of beginning (29%), advanced (36%), and internship (31%) level students, and was primarily female (84%) and Caucasian (89%). Slightly over half of the students' supervisors were female (53%), and most were Caucasian (87%). Participants completed the Supervisee Nondisclosure Survey [adapted from qualitative results of Ladany, Hill, Corbett, & Nutt (1996)], the Trainee Disclosure Scale (Walker, Ladany, & Pate-Carolan, 2007), the Working Alliance Inventory/Supervision-Short Form (Ladany, Mori, & Mehr, 2007), and the Trainee Anxiety Scale (Ladany, Walker, Pate-Carolan, & Gray-Evans, 2007), all related to their most recent supervision session. The researchers distributed the online survey through directors of counseling and clinical masters and doctoral programs, as well as Association of Psychology Postdoctoral and Internship Centers-approved internship training directors.

Eighty-four percent of the sample reported withholding information during their last supervision sessions, with a mean number of 2.68 nondisclosures (SD = 1.77). Multivariate regression analyses revealed trainee anxiety during the supervision session and supervisory working alliance were significantly related to both frequency of nondisclosure and willingness to disclose during supervision. Higher anxiety was associated with increased frequency of nondisclosure and decreased willingness to

disclose, while stronger alliance was associated with decreased nondisclosure and increased willingness to disclose. Reasons given for nondisclosure did not specifically include anxiety, although several appear to be related, such as impression management, perceived negative consequences, negative feelings, and uncertainty regarding how to address an issue. The authors concluded trainees would be more willing to disclose information if they were less anxious about supervision. This conclusion fits with the quantitative results of Ladany, Hill, Corbett, and Nutt (1996), who found negative feelings to be the fourth most frequent reason given for nondisclosure in a survey of 108 supervisees, and with the qualitative results of Hess et al. (2008), who interviewed 14 pre-doctoral interns and found anxiety to be among the negative emotions which contributed to nondisclosure in supervision.

Strengths of this study include the large sample and demonstration of a significant effect for anxiety even when controlling for working alliance. The authors did not include, however, a measure of effect size or the beta weights for the predictors, so one cannot determine the relative importance of either anxiety or working alliance for predicting nondisclosure. The authors also noted that data collection occurred near the end of semester, so evaluations may have been especially prominent in supervisees' minds. Additionally, the data refer to one supervision session only; it is possible information not disclosed might have come up naturally in the next session. A single session also may have failed to capture the typical pattern of nondisclosure.

Summary. Literature on the effects of anxiety on supervision shows a fair amount of research support for theorized high levels of anxiety. Qualitative results identified anxiety as a class of hindering effects in group supervision, and quantitative

results demonstrated anxiety's effect on the amount of nondisclosure and willingness to disclose by supervisees. The link to nondisclosure is particularly concerning, given that many supervisors use self-report as a primary method of supervision (Bernard & Goodyear, 2009).

Effects of Supervisee Anxiety in Supervision on Clients

Emerson (1996) uses the framework of potential threats to client care to discuss the difficulty anxious and fearful students experience vis-a-vis feedback, particularly if the feedback is focused primarily on correction and criticism. She points to the contradictory messages trainees receive as a source of increased anxiety about performance evaluation, which then inhibits performance and their ability to learn new skills. Emerson states the contradictory messages are about what is most important to focus on in session. On one side, students are told to focus on the process of counseling rather than details, but then supervision sessions are focused almost exclusively on content. She suggests some supervisors may be modeling abuse of power by withholding or omitting positive feedback, leaving supervisees feeling attacked rather than challenged. Emerson posits that such patterns in supervision may be passed on to clients via parallel process (i.e., therapists not providing positive feedback to clients making them feel criticized). Her hypothesis raises some important questions about the way the supervisory relationship is conceptualized and potential ramifications of delivering unbalanced feedback, which is reminiscent of need to balance direction and support called for by Hart and Nance (2003).

The proposed link between supervisee anxiety and resistance in the supervisory relationship could also affect clients. One potential avenue for such effects is the

supervisory working alliance, which may decline in the face of resistance behaviors. Patton and Kivlighan (1997) compared the supervisory working alliance ratings of supervision dyads with working alliance ratings of the supervisees and their clients over four sessions. The clients were 75 undergraduate volunteers selected from a larger pool of potential participants; they had been prescreened by counseling psychology doctoral students (who also served as the supervisors in this study) using Sifenos' (1972) criteria for brief psychotherapy. These students, drawn from courses in child and adolescent development in a teacher education program, received extra credit for participation. The sample clients were predominantly female (79%) and Caucasian (92%). The counselors were 75 graduate students in a pre-practicum course at a large, public Midwestern university; they were primarily female (71%) and Caucasian (85%). While "most" students were engaged in their first formal counseling experience, "some" had been employed as paraprofessionals before enrolling in the training program (p. 109). The supervisors were 25 doctoral students (72% female, 100% Caucasian) who were each responsible for three trainees. Measures included the Working Alliance Inventory (WAI; Horvath & Greenberg, 1989) and the Supervisory Working Alliance Inventory (SWAI; Efstation, Patton, & Kardash, 1990).

Clients were randomly assigned to counselors (though some had to be switched due to scheduling conflicts) and asked to discuss an actual personal concern over the course of four sessions. These sessions were observed by each trainee's supervisor through a one-way mirror; the supervisor also had an option to intervene by entering the room to provide feedback to the trainee or to model an appropriate intervention. Supervisors also met with each trainee for 50 minutes after each session to discuss the

supervisor's evaluation of the session, explore the trainee's reactions to the session, and prepare for the upcoming session. After each session, clients completed the WAI and trainees completed the SWAI. Hierarchical Linear Modeling revealed time (week-to-week changes) accounted for 26% of the variance in WAI scores, and changes in SWAI scores accounted for 43.6% of the time variance (i.e., 11.3% of overall variance in WAI scores). In other words, the strength of the supervisory relationship was having an effect on the strength of the counseling relationship.

This study extends previous case study findings (e.g., Alper, 1991; Friedlander, Siegel, & Brenock, 1989) and provides strong evidence for the importance of the strength of the alliance between supervisor and supervisee. As this was a correlational study, however, it cannot be determined whether the supervisory relationship caused the therapeutic relationship to strengthen, vice-versa, or a third variable may have caused both. Additionally, the use of clients who were not actively seeking treatment, the short nature of the counseling, and the live supervision techniques employed, limit generalizability of these results; and the self-report nature of the WAI and SWAI introduce the potential for socially desirable response sets.

Summary. Theory has outlined potential ramifications of supervisee anxiety for clients. While perhaps plausible, research support is necessary before interventions based on these theories can be confidently implemented. Empirical support has been demonstrated for the relationship between the supervisory working alliance and the therapeutic working alliance, but further research needs to be conducted before causal interpretations can be made.

Supervision of Trainees in Genetic Counseling

Hendrickson, McCarthy Veach, and LeRoy (2002) were the first to systematically investigate genetic counseling supervision. These authors conducted three focus groups with a total of 16 students and three focus groups with a total of 11 supervisors and analyzed the transcripts using CQR methodology (Hill et al., 1997). Live supervision was the most common method of supervision reported, and supervisors often reported learning how to supervise *on the job*. Strengths of live supervision described by students and supervisors included improved student development, better feedback, and feeling comforted by having a safety net. Reported limitations of live supervision included difficulty with feedback, the changed dynamic of the provider-patient relationship (e.g., counseling for the supervisor rather than for the patient), students feeling they had to compete "for talk time" with their supervisors, anxiety, boundary issues, and students finding it difficult to integrate feedback across multiple supervisors. Overall, participants perceived live supervision as having positive and negative impacts on students, supervisors, and patients.

This study outlined important areas for further research and provided the first data-based exploration of supervision experiences as perceived by either students or supervisors. The participation rate of supervisors, however, was low (15%) which suggests these supervisors may not be representative of the population in some ways. The sample also came entirely from three training programs and affiliated rotation sites in the Midwest, so geographic bias may also be at play.

Lindh, McCarthy Veach, Cikanek, and LeRoy (2003) conducted a survey of 335 members of the National Society of Genetic Counselors (NSGC) about clinical

supervision of genetic counseling students. The most common resource for learning to provide clinical supervision was trial and error, followed closely by student feedback, consultation with peers, and adopting the methods their own supervisors had used. All supervisors reported giving oral feedback in one-on-one settings, and the vast majority provided feedback immediately after sessions very often or always. The three most challenging student characteristics reported were lack of technical knowledge, not incorporating feedback, and ongoing anxiety. Though the study had a usable response rate of only 42%, it helped establish norms of supervision in genetic counseling and sparked research in a number of important related areas.

McIntosh, Dircks, Fitzpatrick, and Shuman (2006) surveyed 36 members of the NSGC listserv using an eight-item online survey. The items were open-ended and asked about games played in supervision. The term "games" comes from Transactional Analysis, a system where the communication (both verbal and non-verbal) between people is documented and analyzed to understand the ways in which people communicate (Bailey & Baillie, 1996). Games are defined as ongoing interactions in which the surface message and the underlying message conflict (e.g., sarcasm, passive aggressive statements) for the purpose of minimizing the negative consequences for the initiator (Berne, 1964). McIntosh and colleagues (2006) set out to investigate whether games in genetic counseling supervision exist and to what extent they were similar to those found in other counseling fields.

A total of 37 games were described, with 10 being initiated by students and 27 by supervisors. McIntosh and colleagues provide full descriptions of these games, but several stand out as potentially caused by or would create supervisee anxiety. "Poor Me"

is a student-initiated game in which the student heavily criticizes their own work in order to gain more praise from the supervisor. "Cozy intern" is a student-initiated game where an underperforming student tries to establish a peer relationship with the supervisor in hopes of preventing negative evaluations. "Controlling feedback" is a student-initiated game where the student begins debriefing sessions with a long self-assessment which prevents the supervisor from having time to offer corrective feedback. "Challenge me" is another student-initiated game where the student asks questions about the supervisor's skills or knowledge to control the focus of supervision. "Letters are due yesterday" is a supervisor-initiated game where supervisors change expectations (specifically deadlines) in order to exert power over the student. Another game related to expectations initiated by supervisors is "I won't tell you what to do but I will say you're doing it wrong." In this game supervisors intentionally provide ambiguous instructions, do not provide assistance, and criticized the intern for not doing the task "right." Finally, "Do it exactly as I do it" is a supervisor-initiated game where the student is required to do everything precisely as the supervisor does things in order to demonstrate control.

This was an anonymous study, so there was no way to determine whether students or supervisors were describing the games reported. The games were also the perceptions of only one person in the dyad, so it is possible reasons other than those posited were responsible for the behaviors described. Frequency of these games was also not assessed. Finally, only 36 people provided complete responses out of 204 returned surveys (17.6%) and with a total listserv membership of approximately 1,500, the response rate (13.6%) and usable response rate (2.4%) suggest the need for caution in interpreting these findings.

Gu, McCarthy Veach, Eubanks, LeRoy, and Callanan (2011) surveyed 198 genetic counselors and 129 genetic counseling students regarding boundary issues in supervision. These authors differentiated between boundary crossings (typically benign variations from standard professional behavior resulting in no harm), boundary violations (intentional deviations from professional boundaries which are potentially exploitative and damaging), and multiple relationships (where a supervisor has a social, financial, or other professional relationship with the supervisee). The survey included quantitative ratings of the appropriateness of 56 behaviors and an open-ended item asking about a challenging experience related to boundaries. Twenty-four students reported a challenging experience, which included boundary crossings or violations as well as multiple relationships in the academic and social realms. These students most frequently described the effects of the situation as *harmful*, followed by *no impact*.

Eubanks Higgins et al. (2013) set out to determine empirically-derived supervision competencies for genetic counseling. They reviewed supervision literature from related health professions (i.e., counselor education, nursing, physical therapy, psychology, social work, and speech language pathology) to create 160 potential competencies. Next they used a Delphi method to determine the importance of each of these competencies for genetic counseling supervision. Invitations to participate were sent to training program directors, which asked the program directors to nominate three experienced supervisors and return contact information for themselves and the nominees. A total of 97 potential participants were identified in this manner from 26 programs. The study used an online Delphi method to allow for anonymous communication and avoid

the effects of dominant personalities and pressure to conform (Hsu & Sandford; Pickard, 2007).

Participants rated each of the items using an 8-point semantic differential scale (i.e., *1 = Not essential, 8 = Essential*) and were also given space to make comments about each item. Participants were asked to email the investigators after completing their ratings so identifying information would not be associated with responses. The investigators reviewed the responses which resulted in changing the wording of 24 items, adding three items, removing two items, and merging two similar items. Next they grouped items into nine content areas using the *Standards for Counseling Supervisors* (Dye & Borders, 1990) from counselor education as a model. Those who responded were then contacted to rate items again in Round 2. Following Round 2, the investigators used interpretive content analysis (Giarelli & Tulman, 2003) to independently group items into conceptually similar categories. After they completed their initial groupings, they used discussion to reach consensus on a final classification.

The content analysis resulted in six domains and 15 categories. The domains are: Personal Traits and Characteristics, Relationship Building and Maintenance, Student Evaluations, Student Centered Supervision, Guidance and Monitoring of Patient Care, and Ethical and Legal Aspects of Supervision. Items generally had a high degree of agreement across participants and ratings tended to be highly similar from round to round (90.5% had a mean difference of less than 0.3). The final competencies reflect many of the themes previously identified in the genetic counseling supervision literature (i.e., Gu et al., 2011; Hendrickson et al., 2002; Lee, McCarthy Veach, & LeRoy, 2009; Lindh et al., 2003; McIntosh et al., 2006). While this study included a variety of supervisors from

across the field, the results should still be taken as a preliminary step toward the creation of supervision competencies. Further research into the degree of support these competencies will receive in the field, the relative importance of these competencies, and how to operationalize them competencies into measurable behavior are needed.

Summary. Empirical investigation of supervision in genetic counseling is nascent, as only 11 years have passed since the first data-based study of supervision was published. Thus, more research is needed to explore genetic counseling supervision processes and outcomes. Supervision in genetic counseling has been found to include beneficial and challenging components for students. Common strengths include skill development, support from supervisors, and receipt of better feedback. Common challenges are handling corrective feedback, changing dynamics of genetic counseling sessions, fighting for control of sessions, boundary issues, and anxiety. Supervisors and supervisees have been found to play games in supervision, and supervisees report having experienced boundary violations. Much of this research has been qualitative or preliminary survey research, which is appropriate given the state of the literature. The recently published supervision competencies are a positive step toward developing empirically based supervision models specific to genetic counseling.

Anxiety in Genetic Counseling Trainees

Anxiety is theorized to be common among genetic counseling students (e.g., McCarthy Veach, LeRoy, & Bartels, 2003), and it has even been called a "normal and predictable state" (Borders, Eubanks, & Callanan, 2006, p. 212). The only published study on genetic counseling student anxiety to date is Jungbluth et al. (2011). These authors surveyed 225 first and second year genetic counseling students recruited through

email invitations sent to program directors. The electronic survey consisted of demographic items, the STAI (Spielberger et al., 1983), a questionnaire asking how participants spend their time on a typical day, a questionnaire asking how frequently and intensely participants were affected by stressors (which was adapted from Stecker, 2004), and three open-ended questions asking about stress.

Jungbluth et al.'s sample had an average trait anxiety score of 44.6 (*SD* = 4.10, Range: 31-57) which corresponded to the 85th percentile for adult female norms (Spielberger et al., 1983). Their sample was also shown to have higher levels of trait anxiety than a medical student sample. Using principal axis analysis, the 24 stress sources were reduced to five factors accounting for 55% of the total variance. The five factors were Professional Uncertainty, Personal Life Events, Interpersonal Demands, Academic Demands, and Isolating Circumstances. Regression analyses predicting state anxiety found trait anxiety, Interpersonal Demands, Isolating Circumstances, and having high Professional Uncertainty while in the 2nd year of a program were all significant predictors.

Qualitative analyses of the most rewarding aspects of the training experience to date found academic rewards were the most commonly reported, followed closely by interpersonal interactions, and then by career and personal affirmations. Challenging experiences most commonly focused on the demands of the program. Other challenging experiences included interpersonal interactions, intrapersonal reactions, financial strain, and isolation. In terms of advice to future students, the most common theme described the importance of self-care, with others domains including managing responsibilities and seeking support.

Jungbluth et al. had a relatively high response rate (conservatively estimated at 68%), but the possibility of selection bias is still present. The regression analyses highlighted some important areas, but the model included only around half of the total sample because of missing data issues. Further, the model only accounted for 19% of the total variance, so clearly additional important contributors to state anxiety were not identified. The authors also did not separate their themes into domains and categories, so some of the richness of the data was lost. For example, it is unclear how many of those commenting on interpersonal interactions were discussing friends vs. faculty vs. clinical supervisors.

The Jungbluth et al. study does set the stage for the present study in a number of ways. First, it establishes the extent of trait anxiety among genetic counseling students in a nationwide sample. The high levels compared to working adult women and other training programs thought to be stressful (i.e., medical students) calls for further study. Second, several of the themes contained mixed messages, such as interpersonal interactions being the best and worst aspects of the students' training. Similarly, aspects of supervision were mentioned in descriptions of both positive and negative impressions. Third, specific clinical experiences were not asked about in the study because many 1st year students would not yet have been in these situations. Thus, further exploration of clinical rotations is needed. Finally, the authors called for further research on the effects of anxiety.

Synthesis

Research on genetic counseling supervision is in its relative infancy, but a number of important initial discoveries have been made. Comparisons to other related fields such

as psychology are helpful in determining areas to investigate in genetic counseling, but only to a certain point. It is important for genetic counseling to identify its own unique developmental trajectory rather than seek to confirm or refute theories and results found elsewhere. Thus, qualitative research to explore the rich experience of genetic counseling supervisees provides an excellent starting point for theories and hypotheses to develop.

The complexity of the perspectives of supervisees has been demonstrated in seemingly contradictory reports of supervision in different studies. Consideration of additional variables is needed to tease apart the relationships between positive and challenging experiences of broader phenomena. Based on the research by Jungbluth et al. (2011), anxiety is relatively high among genetic counseling students when compared to general population norms. Psychotherapy literature also describes links between anxiety and supervision, performance, and self-efficacy of therapists-in-training. As anxiety is likely to be triggered in evaluative situations such as supervision, anxiety seems a good place to begin looking for differences among supervisee experiences.

The present study sought to advance the genetic counseling supervision literature by conducting qualitative interviews to obtain more in depth descriptions of supervisee impressions of their supervision experiences. Students' overall perspectives regarding their clinical training in general and supervision specifically were elicited to understand what they regard as the most beneficial and challenging aspects. The present study builds upon Hendrickson et al.'s (2002) exploration of the benefits and challenges of live supervision while also adding questions about having multiple supervisors per rotation. Exploration of difficult conversations related to both personal and professional topics builds on Gu et al.'s (2011) study of boundary issues in supervision. Jungbluth et al.'s

(2011) study is also extended by asking students specifically how anxiety affects them in relation to supervision, as well as exploring coping strategies they use both in and out of clinical settings. The present study also provides an interesting counterpart to the competencies developed by Eubanks Higgins et al. (2013), in that student-identified aspects of quality supervision may be largely consistent or deviant from those identified by genetic counseling supervisors and genetic counseling program directors.

The present study used 13 interview questions used to answer seven major research questions investigating differences due to student trait anxiety level. The questions asked, "Are there differences among levels of anxiety in…

1. …satisfaction with supervision or with clinical rotations in general?
2. …interactions with patients?
3. …perceptions of clinical supervisors?
4. …perceptions of the structure or logistics of supervision?
5. …perceptions of supervision processes?
6. …perceptions of how anxiety personally affects them in clinical rotations in general or supervision in specific?
7. …strategies used to manage anxiety or the perceived efficacy of these strategies?

Chapter 3: Methodology

Participants

After receiving approval from the University of Minnesota Institutional Review Board, an email invitation (See Appendix A) was sent to the program director of each of the programs in the United States and Canada accredited by the American Board of Genetic Counseling except the researchers' institution ($N = 32$). At the time of the study, an estimated 400 students were enrolled across these programs, with approximately half being in their 2nd year. This email asked program directors to forward an email invitation to the 2nd year students currently enrolled in their programs, inviting them to participate in a study of anxiety and supervision in genetic counseling students (see Appendix B). The invitation included a description of the study, informed consent, and a link to participate in the online survey portion of the study.

The last page of the online survey included an invitation to participate in the interview portion of the study. Those survey respondents who volunteered to be interviewed were divided into three groups based on their trait anxiety scores: high anxiety, moderate anxiety, and low anxiety. The 33rd and 66th percentiles of trait anxiety of the overall sample were used as cutoffs to determine the groups.

A target of 45 interviews was set, 15 from each anxiety group, following the recommendation by Hill (2012) that 12-15 interviewees are sufficient to obtain data saturation. The research team predetermined, however, that if data saturation was found before conducting 15 interviews per group, no further interviews would be conducted. Data saturation occurs when no new information is being contributed by additional participants. In the present study, data saturation was reached after 40 interviews. As

each anxiety group had reached the recommended range of participants (high = 15, moderate = 12, low = 13), data collection ended. Participant demographics are summarized in Table 2 and described in Chapter 4. Random five-digit identification numbers were assigned to each participant to reduce the likelihood the primary investigator would recall which anxiety group participants belonged.

Design

This study employed an observational design relative to the estimation of current anxiety levels and anxiety proneness in genetic counseling students, as no variables were manipulated. The qualitative portion of the study used a phenomenological approach, seeking to "produce an exhaustive description" (McLeod, 2001, p. 38) of the phenomenon. Phenomenology also seeks to consider the experience under examination while setting aside, or bracketing, one's experiences and biases, thereby describing the phenomenon as closely to reality as possible (Colaizzi, 1978).

Instrumentation

Online survey. The online survey contained a total of 35 items distributed among three sections. The complete survey is contained in Appendix C. The first section consisted of 10 items. Two of these items confirmed eligibility for the study [i.e., "Will this coming academic year (2011-2012) be your second year in your program?" and "Will you have started clinical rotations by September 15th, 2011?"]. A third item asked if the participant had received formal clinical supervision in a health services field other than genetic counseling. The next seven items assessed demographic information (e.g., gender, age).

The second section consisted of the trait subscale of the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983), a self-report measure of anxiety-proneness. The 20-items assess how a respondent typically feels (e.g., *I lack self-confidence*); they are scored on a 4-point rating scale (1 = *Never*; 2 = *Somewhat*; 3 = *Moderately so*, 4 = *Almost always*). While the behavioral anchors are the same for all items, some items are negatively worded and thus are reverse scored. Weighted scores for each subscale are summed, giving trait scores ranging from 20-80, with a larger score being indicative of higher anxiety. The STAI has been well validated and used in over 2,000 research studies (Spielberger et al., 1983). Spielberger et al. (1983) report empirical evidence of strong internal consistency, high test-retest reliability for the trait subscale, and construct validity.

The final section of the survey contained an invitation to participate in the second phase of the study, a series of two interviews lasting approximately 30 minutes each. This study includes the results of only the first round of interviews. If participants were willing to be interviewed, they were asked to provide contact information.

The online survey was piloted with four doctoral students in counseling psychology to test for delivery and implementation issues as well as clarity of content. The online survey was also piloted with four recent genetic counseling graduates to test for clarity and relevance of content. Minor revisions were made to survey items and the format of the survey to clarify content and improve readability.

Interview questions. The 13 questions and sub-questions used in the interview portion of the study were derived from a review of literature and the clinical and research experience of the research team, which included a genetic counseling program training

director, licensed psychologists, and graduate students in counseling psychology. The complete interview protocol is presented in Appendix D. The interview protocol was piloted on one doctoral student in counseling psychology who previously worked as a genetic counselor, to gauge participant reactions to questions and fatigue during the interview. Minor revisions were made to interview questions to improve clarity based on feedback from the pilot participant.

Procedure

Interviews. Students selected to participate in the interview phase of the study were contacted by the primary investigator via email to schedule their semi-structured, audio-recorded, phone interviews (see Appendix E). Those who did not respond within 7 days were sent the email invitation again. If they still did not respond, no further contact attempts were made. Students who scheduled an interview were sent a confirmation email (see Appendix F) the day before the interview reminding them of the appointment and providing the definition of supervision from Bernard and Goodyear (2009) used in the interview. Interviews were conducted between August and early October of 2011. Students who volunteered to be interviewed but were not selected for an interview were sent an email thanking them for their interest but explaining their participation was not needed (see Appendix G).

At the beginning of each interview, the interviewee was reminded of his or her right to withdraw from participation, and consent to record the interview was secured. This investigator then read the following definition of clinical supervision:

> *Supervision is an intervention provided by a more senior member of a profession to a more junior member or members of that same profession.*

> *This relationship is evaluative and hierarchical, extends over time, and has the simultaneous purposes of enhancing the professional functioning of the more junior person(s); monitoring the quality of professional services offered to the clients that she, he, or they see; and serving as a gatekeeper for those who are to enter the particular profession.* (Bernard & Goodyear, 2009, p. 7)

Participants who indicated on the initial survey they had previously received clinical supervision in a field other than genetic counseling were asked to describe their experience before beginning the main interview.

A semi-structured interview protocol was used to ensure participants received the questions in the same order while also allowing for follow-up questions/prompts to clarify or explain responses (Patton, 2002). All interviews were conducted by the primary investigator, a Caucasian, male doctoral student in counseling psychology, to provide consistency in how follow-up questions were handled. Before beginning the interviews, he bracketed his biases by writing what he expected to hear in response to the questions (see below for description of all analysis team members' bracketing). Following completion of the interviews, the content was transcribed by a professional transcriptionist for analysis.

Analysis team preparation. The primary analysis team consisted of the primary investigator and two graduate student research assistants. The primary investigator was experienced in CQR, having worked on two previous studies using this process of analysis. Both research assistants were masters' students in counseling psychology (one female and one male, both Caucasian). Before beginning work on the project, they were

given a copy of the interview questions in order to bracket their biases. Descriptions of the expectations of all members of the analysis team are presented in the next section.

Both research assistants had some exposure to genetic counseling through their pre-practicum (i.e., counseling skills) course, which included both counseling and genetic counseling students. Additional information about the structure of genetic counseling training and the format of clinical rotations was also provided to research assistants. As neither had prior experience with CQR, they were trained before beginning work with the transcripts. After reading publications explaining the approach (i.e., Hill et al., 1997; Hill et al., 2005), the pilot interview was coded as a team to illustrate the process.

Bias bracketing. The bias bracketing documents are presented in Appendix H and summarized here. In general, participants were predicted to be fairly open and honest, with increased comfort and willingness to share critical impressions developing throughout the interview. The research team expected interviewees to give mostly positive overall impressions of their clinical experiences, emphasizing practical experience with clients and refinement of skills as the most positive points and pressure related to multiple supervisors or supervisor observation as the most negative points. Regarding supervision, less satisfaction was predicted due to difficulty adapting to multiple demands and personalities. Patients who were either angry or quiet were expected to be the most difficult, as well as those who were being given bad news. Good supervisors were presumed to be clear communicators, available, caring, and serve as mentors. The most difficult supervisors were expected to be those who were too busy to interact with students frequently, were perceived as over-controlling, were vague in describing expectations, or did not balance positive and corrective feedback.

Regarding the logistics of supervision, the team expected the advantages of having supervisors present in session would be feelings of comfort and security in having access to information, while the disadvantages were thought to be increased anxiety and tendencies toward perfectionism. Multiple supervisors were predicted to be seen as positive in that they would provide a variety of perspectives and increase the chances of partnering with someone students felt comfortable with, but negative in terms of making adjusting to supervisor expectations more challenging and struggling to integrate disparate feedback.

Supervision sessions were predicted to focus primarily on patient-related issues rather than supervisees' reactions to content, and the ideal balance was expected to be similar. The research team expected interviewees to report little to no discussion of the supervisory relationship. In terms of control over content, supervisors were predicted to control the majority, with supervisees desiring more in the ideal situation. The most difficult topics to discuss with supervisors were presumed to be mistakes committed by the supervisee and aspects of the supervisory relationship.

The team thought interviewees would describe themselves as somewhat anxious, with anxiety contributing to success by fueling preparation but detracting from performance by making connection with patients more challenging. Interviewees were expected to approach supervision with more trepidation due to anxiety, and have more difficulty in bringing up topics like mistakes in supervision. Strategies for coping with anxiety were predicted to focus primarily on things like exercise, time with family, and nutrition, and be judged as more effective in everyday life than clinical situations.

Analysis

Descriptive statistics for the demographic items and trait anxiety were computed. Four interview questions were inductively analyzed by the primary investigator alone and audited by a licensed psychologist. These questions focused on more concrete activities or had such brief responses they were easily classified into similar domains. This process was used for the following questions:

- Question 8
    - Part A: On average, across all supervisors, how much have you talked about your personal reactions and emotions versus talking about patient issues?
    - Part B: On average, across all supervisors, what would be the ideal balance between your own reactions or impressions of sessions versus talking about clinical or patient-focused issues?
    - Part C: On average, across all supervisors, how much have you talked with your supervisor about the relationship between the two of you?
- Question 9
    - Part A: On average, across all supervisors, how much of what you talk about in supervision has been decided by your supervisor compared to how much has been decided by you?
    - Part B: On average, across all supervisors, what would be the ideal balance of how much of the content of supervision is decided by you versus decided by your supervisor?
- Question 12
    - Part A: What strategies do you typically use to manage anxiety in your day-to-day life?

    - Part B: How well do these strategies typically work for you?
- Question 13
    - Part A: What strategies do you typically use to manage anxiety related to your clinical work?
    - Part B: How well do these strategies typically work for you in this context?

Consensual qualitative research (CQR; Hill, 2012; Hill, Thompson, & Williams, 1997; Hill et al., 2005) procedures were used to inductively categorize the content from the remaining interview questions. The CQR method uses a four step process. The first stage consists of creating domains (major topic areas) by grouping clusters of conceptually similar responses. The second stage focuses on identifying categories within these domains and producing definitions which illustrate the core ideas of domains and categories. The third stage entails cross-analyzing the interviews to tabulate frequencies across domains and categories. Labels are given to each domain and category to denote the relative frequency of responses. *General* is used when all or all but one or two participants are represented. *Typical* is used when more than half of the participants are represented. *Variant* is used when less than half but more than one or two participants are represented. Finally, *Rare* is used when only one or two participants are represented. Table 1 contains the number of participants needed for each label in each of the anxiety groups as well as the overall sample. The fourth stage of CQR consists of having the domains and categories audited by a member of the research team not involved in coding.

Table 1

Number of Participants Required for Consensual Qualitative Research Frequency Labels for each Anxiety Group and the Total Sample

Group	*Rare*	*Variant*	*Typical*	*General*
Total	*n* = 1-3	*n* = 4-19	*n* = 20-37	*n* = 38-40
Low Anxiety	*n* = 1-2	*n* = 3-6	*n* = 7-10	*n* = 11-13
Moderate Anxiety	*n* = 1-2	*n* = 3-5	*n* = 6-9	*n* = 10-12
High Anxiety	*n* = 1-2	*n* = 3-7	*n* = 8-12	*n* = 13-15

Note. Labels based on the definitions provided by Hill (2012).

The analysis team met after each member independently went through the first transcript to share what they noted as significant aspects of the participant's responses. These significant aspects were discussed until consensus was reached as to what was important in the response. This process was repeated for the next 15 transcripts. All analysis team members were blind to which anxiety group the transcripts belonged until the final domains and categories were set. After 16 transcripts had been coded, representing 40% of the sample, the research team met to form preliminary domains and categories. Each interview question was considered separately and each team member independently coded the transcripts into domains and categories. The team then met to discuss classifications until a consensus was reached. Preliminary names and definitions for each domain and category were also created and discussed until consensus was reached.

These preliminary domains and categories were used for the remainder of the transcripts, and important aspects of responses which did not fit any of the established domains or categories were placed in a temporary "new" domain to be reclassified once all transcripts had been analyzed. At this point, the research team shifted from each

member reviewing each transcript to the primary investigator and one research assistant reviewing each transcript, thus the remaining transcripts were split into two groups. The two members independently coded each transcript and discussed disagreements until consensus was reached. One transcript from each group was also randomly selected to be reviewed by the third team member. No additional salient information or alternative coding was found, thus providing evidence that moving from three reviewers to two did not negatively impact coding.

After all transcripts had been coded, the research team collaboratively classified material in the "new" domain into new domains and categories or assigned them to existing domains or categories and adjusted the definition appropriately. Following this final assignment, the primary investigator reviewed the contents of each domain and category to determine if the preliminary definition was still representative of the responses and adjusted the definition if appropriate. Following cross-analysis, the final coding was reviewed by a licensed psychologist serving as the data auditor, and discussed with the research team until a consensus was reached.

After the final coding had been set, an additional round of cross-analysis was conducted to determine if differences between anxiety groups were present (see Table 1 for explanation of frequency labels). Hill and colleagues (Hill, 2012; Hill et al., 2005) recommend a discrepancy of at least two frequency labels in order to call groups different (e.g., rare vs. typical, general vs. variant). The original CQR protocol (Hill et al., 1997) called for a single label discrepancy (e.g., typical vs. variant), but this was adjusted because of concerns that a one-person difference could be seen as meaningful. While the concerns over the original protocol are valid, the revised recommendation appears overly

stringent. Thus, in the present study, domains and categories that differ by at least two frequency labels are considered to indicate a high likelihood of differences between groups. Those which are one frequency label apart are considered to indicate a moderate likelihood of differences between groups, as long as there is more than a two participant difference between them. For domains or categories in which one or two of the groups has no participants, this will also be considered a moderate likelihood of differences. Finally, groups which have the same frequency label or are only one or two participant difference are considered to indicate a low likelihood of differences between groups.

Chapter 4: Results

Participants

Eighty-six genetic counseling students began the online survey, and 83 (96.5%) completed the entire survey. Given the estimated 200 second year genetic counseling students, the response rate was 41.5%. One of the three who did not complete the survey was disqualified because she or he was not in the second year of training. Of the 83 complete responses, three were removed because their training program was not located in the U.S. or Canada, leaving 80 participants in the final sample (useable response rate = 40%).

Demographic statistics for the initial survey sample are presented in Table 2. The sample was largely Caucasian (90%) and female (97.5%), which is consistent with previous estimates of the population of genetic counseling students (Lega, McCarthy Veach, Ward, & LeRoy, 2005; Yashar, 2010). The vast majority were in genetic counseling programs in the United States (95%), did not have a graduate degree before beginning their program (90%), and had not received clinical supervision outside of genetic counseling (82.5%). Overall, 85% (n = 68) of those who filled out the survey consented to participate in interviews.

Those who had received supervision previously primarily had experiences in volunteer positions related to genetic counseling as an undergraduate or before they started their program (e.g., taking patient histories, conducting basic tests such as EEGs), while a few had experience in a related field (e.g., paramedic, addiction counselor, dental assistant). All participants described their previous supervision experiences as positive.

Table 2

Survey Participant Demographic Summaries for the Initial Survey Sample and Broken Down By Trait Anxiety Group

Variable	Total		Low		Moderate		High	
	n	***%***	***n***	***%***	***n***	***%***	***n***	***%***
Trait Anxiety Score								
M	37.5	--	29.0	--	36.9	--	47.5	--
SD	8.98	--	2.52	--	2.29	--	6.19	--
Supervision in Another Setting								
No	66	82.5	27	87.1	16	76.2	23	82.1
Yes	14	17.5	4	12.9	5	23.8	5	17.9
Gender								
Female	78	97.5	31	100.0	20	95.2	27	96.4
Male	2	2.5	0	0.0	1	4.8	1	3.6
Racial Identity								
Caucasian	72	90.0	29	93.5	19	90.5	24	85.7
Asian American	4	5.0	0	0.0	2	9.5	2	7.1
Other	4	5.0	2	6.4	0	0	2	7.2
Age								
M	25.3	--	25.2	--	24.2	--	26.0	--
SD	4.61	--	5.33	--	1.48	--	5.26	--
Relationship Status								
Committed Relationship	37	46.3	11	35.5	11	52.4	15	53.6
Single	24	30.0	13	41.9	6	28.6	5	17.9
Married	14	17.5	3	9.7	4	19.0	7	25.0
Divorced	3	3.8	3	9.7	0	0.0	0	0.0
Other	1	1.3	0	0.0	0	0.0	1	3.6
Highest Degree Completed								
Bachelor's	72	90.0	29	93.5	20	95.2	23	82.1
Master's	7	8.8	2	6.5	1	4.8	4	14.3
Doctoral	1	1.3	0	0.0	0	0.0	1	3.6
Size of Cohort								
7 or more	52	65.0	22	71.0	14	66.7	16	57.1
6 or less	27	35.0	9	29.0	6	33.3	12	42.9
Location of Program								
USA	76	95.0	30	96.8	20	95.2	26	92.9
Canada	4	5.0	1	3.2	1	4.8	2	7.1
Consent to Participate in Interview								
Yes	68	85.0	27	87.1	15	71.4	26	92.9
No	12	15.0	4	12.9	6	28.6	2	7.1

Note. $N = 80$

The three anxiety groups were determined by separating the sample according to percentiles. The low anxiety group included those at or below the 33rd percentile, which in this sample corresponded to trait anxiety scores of ≤ 32 (n = 31). The moderate anxiety group included those above the 33rd percentile and below the 67th percentile, which corresponded to trait anxiety scores > 32 and ≤ 41 (n = 21). The high anxiety group included those above the 67th percentile, which corresponded to trait anxiety scores > 41 (n = 28).

Demographic variables were similar across anxiety groups and generally comparable to the overall sample (see Table 3), as was the willingness to participate in the interview portion of the study. The participants who completed the interview phase of the study had similar demographics to the overall sample (see Table 2).

Interview Results

The interview results are organized around the seven research questions of this study:

1. Are there differences among levels of anxiety in satisfaction with supervision or with clinical rotations in general? (Interview Questions 1 and 3)
2. Are there differences among levels of anxiety in terms of interactions with patients? (Interview Question 2)
3. Are there differences among levels of anxiety in perceptions of clinical supervisors? (Interview Questions 4 and 7)
4. Are there differences among levels of anxiety in perceptions of the structure or logistics of supervision? (Interview Questions 5 and 6)

Table 3

Participant Demographic Summaries for the Entire Interview Sample and Broken Down By Trait Anxiety Group

Variable	Total		Low		Moderate		High	
	n	***%***	***n***	***%***	***n***	***%***	***n***	***%***
Trait Anxiety								
M	37.9	--	27.1	--	37.4	--	47.7	--
SD	9.78	--	2.02	--	2.31	--	6.80	--
Supervision in Another Setting								
No	32	80.0	11	84.6	8	66.7	13	86.7
Yes	8	20.0	2	15.4	4	33.3	2	13.3
Gender								
Female	38	95.0	13	100.0	11	91.7	14	93.3
Male	2	5.0	0	0.0	1	8.3	1	6.7
Racial Identity								
Caucasian	34	85.0	11	84.6	10	83.3	13	86.7
Asian American	3	7.5	0	0.0	2	16.7	1	6.7
Other	3	7.5	2	14.4	0	0.0	1	6.7
Age								
M	25.4	--	26.6	--	24.2	--	25.3	--
SD	5.37	--	7.95	--	1.27	--	4.70	--
Relationship Status								
Committed Relationship	19	47.5	3	46.2	7	58.3	9	60.0
Single	12	30.0	6	23.1	3	25.0	3	20.0
Married	6	15.0	1	7.7	2	16.7	3	20.0
Divorced	3	7.5	3	23.1	0	0.0	0	0.0
Highest Degree Completed								
Bachelor's	37	92.5	12	92.3	12	100.0	13	86.7
Master's	3	7.5	1	7.7	0	0.0	2	13.3
Size of Cohort								
7 or more	25	62.5	8	61.5	10	83.3	7	46.7
6 or less	15	37.5	5	38.5	2	16.7	8	53.3
Location of Program								
USA	39	97.5	13	100.0	12	100.0	14	93.3
Canada	1	2.5	0	0.0	0	0.0	1	6.7

Note. $n = 40$

5. Are there differences among levels of anxiety in perceptions of supervision processes? (Interview Questions 8, 9, and 10)
6. Are there differences among levels of anxiety in perceptions of how anxiety personally affects them in clinical rotations in general or supervision in specific? (Interview Question 11)
7. Are there differences among levels of anxiety in strategies used to manage anxiety or the perceived efficacy of these strategies? (Interview Questions 12 and 13)

The initial analysis included responses from all three groups. The moderate anxiety group was found to have numerous differences from the other two groups. Further analysis, however, showed the moderate anxiety group was largely split into those who responded similarly to the low anxiety group and those who responded similarly to the high anxiety group. This complicates the analysis, as this group actually seemed to contain two distinct subgroups. Further support for subgroups within the moderate anxiety group comes from general consistency between the comparison of self-identification by participants as either anxious or non-anxious people and classification based on their trait anxiety scores on the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). The moderate group was approximately split between those who considered themselves anxious and those who did not, while both the low and high anxiety groups were overwhelmingly skewed in the expected directions with respect to their self-identification.

Therefore, this investigator made the decision to present in this chapter comparison of the low and high anxiety groups only in order to more concisely and clear convey the results. Appendix I contains tables including the classification of domains

and categories for all three anxiety groups, as well as definitions and example quotations for the three categories which contained only moderate anxiety participants.

Within each research question, domains and categories are presented according to the corresponding interview questions and sub-questions. Domains and categories within domains are presented in descending order of prevalence. Verbatim representative quotations are provided for each category or domain. All participants were quoted at least 4 times (M = 7.85, Mdn = 7.5, range: 4-12). Participant responses were complex and therefore often classified into more than one category or domain. Thus, the number of responses per question may exceed the total number of student interviewees. The number of responses are reported both for the sample as a whole and according to anxiety group. Although frequencies differ among the three anxiety groups, responses themselves were quite similar regardless of anxiety level. Therefore, this investigator decided not to include a quotation from every group for each category/domain. In these sections, LA = Low Anxiety and HA = High Anxiety.

Clinical Impressions of Interviewees

On average, participants appeared to be fairly open and honest. In some cases the responses were difficult to believe, such as not being able to imagine any conversation with a supervisor that would be uncomfortable, but the vast majority seemed to be making thoughtful comments. They typically provided rich answers without the need for much prompting or clarification from the interviewer. Most interviewees were able to come up with answers to each question without difficulty. A few questions, however, seemed generally more difficult to answer. Questions 8 and 9 each asked participants to average across all their supervisors, and several commented on how difficult this was

because of their variety of experiences. Based on their comments, a number of participants seemed to interpret Question 10 (regarding most uncomfortable conversations with supervisors) as requiring a large amount of discomfort, which was not necessarily the intent of the question. Thus, some may have reported nothing has been uncomfortable because of a high threshold. The participants tended to be engaged and pleasant to converse with, but generally took a fairly intellectual approach to answering questions. Few spoke with significant emotion during the interviews, but the emotions expressed tended to be admiration, frustration, embarrassment, and satisfaction. Technical difficulties briefly disrupted four interviews (i.e., dropped calls), but no interviews were significantly affected.

Research Question 1: Are there differences among levels of anxiety in levels of satisfaction with supervision or their rotations in general?

Interview Question 1: Overall, how satisfied are you with the clinical experiences you have had in your program thus far?

Responses to this question yielded two domains: highly satisfied and moderately satisfied. None of the participants reported being very dissatisfied with their experiences.

Domain 1: Highly satisfied (Total *n* = 19; LA = 9; HA = 10). These students described themselves as "really" or "very" satisfied with their clinical experiences. For example, "I have been very satisfied" (LA participant) and "I've been really satisfied so far" (HA participant)

Domain 2: Moderately satisfied (Total *n* = 8; LA = 3; HA = 5). Interviewees in this domain described themselves as "mostly" or "pretty"

satisfied. For instance, "I've been pretty satisfied" (LA participant) and "I would say mostly satisfied" (HA participant).

Interview Question 1a: What have been the most positive things about your clinical rotations?

Responses to this question yielded five domains: supervision, practical experience & skill development, variety of clinical experiences, confidence & comfort, and making a difference.

Domain 1: Supervision (Total *n* = 15; LA = 8; HA = 7). Participants in this domain noted particular aspects of supervision which enhanced their experience of their rotations. This domain includes two categories.

Category 1: Feedback (Total n = 13; LA = 7; HA = 5). Many students commented on the feedback they have received from supervisors as being particularly helpful.

> *…getting really constructive feedback is really helpful for me and I think my supervisors have all been really, you know, great at giving me tangible things that I can work on for the future.* (HA participant)
>
> ---
>
> *I think having direct feedback from a supervisor about my strengths and weaknesses in kind of in each case and overall has been quite helpful.* (HA participant)

Category 2 Support (Total n = 8; LA= 4; HA= 4). A number of students mentioned supervisor efforts, characteristics, or qualities that make them feel supported or comfortable, both inside and outside of patient sessions.

I think that it's, I guess the word is, comforting, to know that someone is there who has more experience than you and who can step in just in case, you know, you slip up, or if you need extra help explaining a concept to a patient, or something like that. (LA participant)

I've been really lucky that my supervisors have been people that I feel comfortable with that I can like, you know, express my concerns and my own anxieties because I do have a lot of anxiety surrounding supervision… (HA participant)

Domain 2: Practical experience & skill development (Total *n* = 14; LA= 5; HA= 9). Participants in this domain commented on their improvement in clinical knowledge or skills through interactions with patients. For example: "I think, you know, having that knowledge base is nice, but also having the practical knowledge is even better…" (HA participant) and "Just the chance to see how the things I've learned in class really apply in clinic, it's hard to think about it so abstractly but then to being clinical experience is like a whole other picture" (HA participant).

Domain 3: Variety of clinical experiences (Total *n* = 11; LA= 4; HA= 7). Several interviewees spoke to the diversity of settings, patients, and supervisors they have encountered in their rotations.

I've had the opportunity to work with a lot of different individuals with a lot of, that each have their own styles of counseling which, I love the opportunity to try out different things and also I've had the opportunity to see a lot of different clinical indications. (HA participant)

I appreciate and really enjoy that we get to see such a huge variety of patients and conditions and we get to go through the most full [sic] *clinics so we see a lot of different settings. We see patients in different atmospheres, so that's a really great learning experience*. (HA participant)

Domain 4: Confidence & comfort (Total *n* = 6; LA= 3; HA= 3). Students in this domain commented on their increased confidence in their clinical skills and greater comfort working with patients as a result of their clinical rotation experiences.

The beginning of the year it was pretty terrifying being the one talking to patients about their condition or their child's condition and now through encouragement and through practice I've been able to be a lot more confident in the session… (LA participant)

This summer I would say the most positive thing was really getting comfortable with the idea of seeing patients and developing the relationship with patients as a healthcare provider, and learning how to be comfortable doing that. (LA participant)

Domain 5: Making a difference (Total *n* = 2; LA= 0; HA= 2). Two interviewees in the high anxiety group mentioned feeling patients benefitted from their counseling. One of these students commented, "I think the most rewarding aspect would be feeling like I am making a difference in, you know, the patient's life" (HA participant).

Interview Question 1b: What have been the most challenging things about your clinical rotations?

Responses to this question yielded three domains: relational factors, personal factors, and external factors.

Domain 1: Relational factors (Total *n* = 18; LA= 9; HA= 9). Participants in this domain focused on interpersonal aspects, especially those with patients and supervisors, which made their experiences challenging. This domain consists of five categories.

Category 1: Challenging supervisor interactions (Total n = 8; LA= 3; HA= 5). A number of students described specific situations where dealing with a supervisor was challenging for them. The situations were challenging for a number of different reasons, including difficulty communicating with supervisors, adapting to different styles of supervision, lack of role clarity, difficulty reading supervisors, receiving corrective feedback, being observed, or logistical issues. For example, "…I worked with six different supervisors and that was a bit difficult because…it felt like they each wanted me to counsel their way…so that was a little challenging, trying to make everybody happy" (LA participant).

> *…if my internal experience is that I'm freaking out and that's not obvious, then the supervisor chooses to focus on different aspects of my performance than they would if they were aware of how my anxiety and lack of confidence is kind of driving what I'm doing and so, and that's a hard thing to bring up to say, "Oh, and by the way, you know, you didn't mention anything about, you know, the fact that I'm kind of terrified of this*

but, you know, can we talk about that?" So I mean because it's just to bring that up is anxiety provoking… (HA participant)

Category 2: Challenging patient interactions (Total n = 8; LA= 5; HA= 3). A few students commented on specific interactions with patients which were challenging for them, such as dealing with sessions which did not follow the student's original agenda, verbose patients, or emotional patients.

I think, well, with genetics some things come up that are very rare that maybe you've never heard of or some social circumstances with the patient that are very extreme come up that you, you know, you weren't expecting. So kind of dealing with things off the cuff, it's a little, like, that's challenging, but I kind of like that of the profession that not every appointment is the same and, you know. There's a lot of different things going on but challenging to have to adapt to, you know, things that you weren't expecting I guess. (HA participant)

I would say one of the most challenging things was dealing with chatty patients. More so when my supervisor was in the room actually, because it was harder to feel like I was aiming to redirect the session to the things, the information gathering that I needed to do without being rude or curt. (LA participant)

Category 3: Translating information (Total n = 3; LA= 2; HA= 1). Three students commented on the challenge associated with explaining complex information in terms the patient can understand. As one interviewee remarked, "The field is very

complicated, and it's hard to necessarily explain everything to someone who doesn't have a scientific background, so really trying to understand things myself and learning how to portray those correctly to other people" (LA participant)

Category 4: Giving bad news (Total n = 3; LA= 2; HA= 1). Three interviewees remarked on the difficult aspects of giving bad news to patients.

> *I think the most challenging part has been just when we've had, you know, in difficult cases. I think anyone can really agree that it's, it's no fun to give bad news and…it's a struggle because it is very difficult, and very emotionally taxing, and, you know, of course with much practice it gets [easier to do], but it's always difficult.* (LA participant)

Category 5: Making mistakes (Total n = 1; LA= 0; HA= 1). One participant spoke about the pressure to not make mistakes, often referring to the seriousness of the situation.

> *And so if I make a mistake or if I don't say something properly, I feel like I'm not giving that person good medical care…I make quite a few mistakes, and it's all that learning process, and so it's great to be able to sit down with patients and be a part of their medical care, but also there's that responsibility behind it which, when things go wrong, it's going to maybe be a little of a downside.* (HA participant)

Domain 2: Personal factors (Total *n* = 16; LA= 7; HA= 9). Participants in this domain commented on intrapersonal issues which made their clinical rotation experience challenging. This domain includes four categories.

Category 1: Managing anxiety (Total n = 9; LA= 2; HA= 7). A number of students referenced their feelings of nervousness, anxiety, and stress related to clinical rotations. About half of these students specifically referenced the supervisor's presence when describing what made them anxious.

> *I think the most challenging thing is probably, there's always a sense of anxiety when someone is in the corner or joining you, your supervisor at the table watching you, and I think just that sense of being watched can create some fear and a little bit of anxiety as to how things go throughout the session.* (LA participant)

> *I would say it would be the stress of always being evaluated. The anxiety that that brings on every time I do a counseling session, knowing that there's somebody who will be there to evaluate and ultimately criticize, you know, my, what I have done.* (HA participant)

Category 2: Managing time (Total n = 4; LA= 2; HA= 2). A few interviewees commented on issues of time management, focusing on balancing demands from clinic, coursework, and family.

> *I think it's probably the time management or just getting used to doing, you know, rotations, doing clinics and also doing schoolwork on the side of that, then working on the thesis, and then still doing all the reading for schoolwork or prep for cases; and it's…I guess the time aspect of everything. Sometimes it feels like there's not enough time to get everything done in the day, and it can be a challenge.* (HA participant)

Category 3: Building a knowledge base (Total n = 3; LA= 2; HA= 1). A few students referenced the amount of biomedical information needed to perform well. For example, "All the information that I have yet to learn because I still don't know" (LA participant).

Category 4: Professional growth (Total n = 3; LA= 2; HA= 1). A few students commented on broader professional issues such as learning to handle constructive criticism or needing to become more flexible.

> *Probably in the beginning not always knowing how to approach , or kind of feeling like I had my own script in my head of what I wanted to go through with the patients, but then if the patient had a different reaction than kind of what I was expecting, or if they took the session in a different direction, or for whatever reason the referral indication was completely off and they thought they were in the office for some other reason, kind of being flexible and going with that and changing my counseling as I went along.* (LA participant)

Domain 3: External factors (Total *n* = 3; LA= 1; HA= 3). A few students referenced factors related to transitioning between rotations, managing the workload of rotations, and dealing with clinic-level problems.

> *Just kind of how temporary they [clinical rotations] are. Like, once you get into the vibe of a certain rotation, you know, your two months is up and you're on to the next one, so it's hard to establish a relationship with the people you're working with and so that they can a feel for who you are and you can get a feel for who they are, you feel like you're, you have a*

> *role in their little team instead of just being, you know, something they have to accommodate…it's hard in the timeframe to feel useful.* (HA participant)

Summary of Responses Related to Perceptions of Clinical Experiences

Table 4 summarizes the response patterns for each anxiety group. Participants in both groups reported high levels of satisfaction more commonly than moderate levels, and no participants described low satisfaction. Similarities across groups included commonly highlighting supervision or the variety of experiences, and having some members speak about increased confidence and comfort with working with patients as positive aspects of clinical rotations. Both groups also had similar considerations of what areas of rotations were the most challenging, and generally endorsed specific challenging aspects with similar frequencies.

No domains or categories met the criteria for strong likelihood of differences (i.e., being two category labels different), but one domain and one category met criteria for moderate likelihood of differences between groups (i.e., being at least one category label different and having at frequency difference of more than two). When describing the most positive things about rotations, high anxiety students were more likely to talk about gaining practical experience and developing skills, as well as making a difference in patients' lives. As for most challenging aspects of clinical rotations, the low anxiety group was less likely to discuss to describe managing anxiety.

Table 4

Domain and Category Frequency Labels for Interview Questions 1, 1a, and 1b

Domain/*Category*	Total		Low		High	
	n	**Type**	***n***	**Type**	***n***	**Type**
Question 1: Overall, how satisfied are you with the clinical experiences you have had in your program thus far?						
Highly Satisfied	19	Typical	9	Typical	10	Typical
Moderately Satisfied	8	Variant	3	Variant	5	Variant
Question 1a: What have been the most positive things about your clinical rotations?						
Supervision	15	Typical	8	Typical	7	Variant
Feedback	*13*	*Variant*	*7*	*Typical*	*5*	*Variant*
Support	*8*	*Variant*	*4*	*Variant*	*4*	*Variant*
Practical Experience & Skill Development*	14	Variant	5	Variant	9	Typical
Variety of Clinical Experiences	11	Variant	4	Variant	7	Variant
Confidence & Comfort	6	Variant	3	Variant	3	Variant
Making a Difference	2	Rare	0	--	2	Rare
Question 1b: What have been the most challenging things about your clinical rotations?						
Relational Factors	18	Typical	9	Typical	9	Typical
Challenging supervisor interactions	*8*	*Variant*	*3*	*Variant*	*5*	*Variant*
Challenging patient interactions	*8*	*Variant*	*5*	*Variant*	*3*	*Variant*
Translating information	*3*	*Rare*	*2*	*Rare*	*1*	*Rare*
Giving bad news	*3*	*Rare*	*2*	*Rare*	*1*	*Rare*
Making mistakes	*1*	*Rare*	*0*	--	*1*	*Rare*
Personal Factors	16	Typical	7	Typical	9	Typical
*Managing anxiety**	*9*	*Variant*	*2*	*Rare*	*7*	*Variant*
Managing time	*4*	*Variant*	*2*	*Rare*	*2*	*Rare*
Building a knowledge base	*3*	*Variant*	*2*	*Rare*	*1*	*Rare*
Professional growth	*3*	*Variant*	*2*	*Rare*	*1*	*Rare*
External Factors	4	Variant	1	Rare	3	Variant

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Interview Question 3: Overall, how satisfied are you with the clinical supervision you have received?

Responses to this question yielded two domains: moderately satisfied and highly satisfied. During two participants' interviews the interviewer inadvertently skipped this question, so the responses to this question total 26 rather than 28.

Domain 1: Moderately satisfied (*n* = 16; LA = 7; HA = 9). Students in this domain described themselves as pretty or mostly satisfied. For example, "I've overall been pretty satisfied" (HA participant) and "So far I've been, I think, relatively satisfied" (LA participant).

Domain 2: Highly satisfied (*n* = 10; LA = 4; HA = 6). Students in this domain described themselves as being very or really satisfied with their supervision experiences thus far. For example, "Very satisfied. Yeah, it's been excellent" (LA participant) and "I've been really satisfied" (HA participant)

Interview Question 3a: What have been the most positive things about clinical supervision?

Responses to this question yielded three domains: supervisor guidance and support, supervisee growth, and supervisor characteristics.

Domain 1: Supervisor guidance and support (Total *n* = 25; LA= 11; HA= 14). Students in this domain focused on an action or service which supervisors have provided for them. This domain includes four categories.

Category 1: Comfort/support (Total n = 15; LA= 7; HA= 8). Students in this category pointed out ways they felt supported by their supervisor in performing their work. For instance, they felt comforted by having an experienced practitioner in the room in case they made a mistake, by receiving praise, and by having someone with whom to process difficult cases.

I think it's been pretty positive when there's a two-way relationship where you feel very comfortable about [overcoming] the challenges that you

have as a student and the things you want to work on and overcome. I think that's been fantastic. (LA participant)

I think hearing supervisors say that everyone struggles with certain aspects of learning and genetic counseling in general makes me feel better about any feelings of inadequacy, so it makes me feel more confident in myself and my abilities by them supporting and normalizing it for me. (HA participant)

Category 2: Advice/feedback (Total n = 14; LA= 7; HA= 7). Many participants described the benefits of receiving timely suggestions from their supervisors to help them get past stumbling blocks and develop the skills to be an independent practitioner.

I think the supervisors who really make a point of telling me the positive things I have done and pointing out where I've made improvements or where I've grown, while at the same time giving me more information and more feedback on where to go from here. (LA participant)

I feel like all the criticism I've gotten has been constructive and most of my supervisors, if there's something I need to work on, they'll give me a tool or a way to do that or suggest something else that I could try, and they're always good about pointing out what things I'm really good at that I should keep doing… (LA participant)

Category 3: A source of confidence/trust (Total n = 7; LA= 3; HA= 4). A few participants described situations in which they felt their supervisors demonstrated confidence in them or trusted them to be able to accomplish something difficult.

> *I think when there's been a couple of times when if I just needed to take a minute to think about what I was about to say to a patient, sometimes they jump in during that kind of couple seconds of quietness and I think the times where they let me take that time and let me speak I think those were the better sessions for me.* (HA participant)

> *I feel like they are really good a lot of times at boosting my confidence, even though I know that I can be hard on myself, I'm nervous every single time, I feel like they really do try to encourage me.* (HA participant)

Category 4: A second set of eyes (Total n = 3; LA= 1; HA= 2). A few students commented on the supervisor's ability to pick up on things they missed and provide an objective viewpoint, both during sessions and on more developmental issues.

> *...you don't necessarily focus as much on word phrasing or mannerisms or on verbal cues that you might be coming across, and so I think for supervisors who are not actively participating in a session, they're more just observing you conducting a session. They have a much better sense in how you are coming across nonverbally and can sort of draw your attention to those sorts of things after the session.* (LA participant)

Category 5: A source of challenge (Total n = 3; LA= 2; HA= 1). A few participants spoke about supervisors who pushed them to take on new challenges in order

to continue growing as a genetic counselor throughout their rotations, but without making them feel uncomfortable.

> *She was very good at identifying like your strengths very early on, so she really did a good job of like pushing me a little bit more than I think I would've pushed myself, which was good because I think I got much more out of the experience.* (HA participant)

Domain 2: Supervisee growth… (Total *n* = 9; LA= 5; HA= 4). A number of interviewees commented on how they have benefitted from being supervised, particularly in terms of a greater sense of confidence, professional growth, and self-awareness. This domain includes two categories.

Category 1: Professional growth (Total n = 9; LA= 5; HA= 4). These students commented on the effects of supervision on their overall professional development, specifically citing increased responsibilities, improved clinical skills, and beginning to determine their personal counseling style.

> *I don't want to become a cookie cutter of one person's counseling style. I want to develop my own counseling style, and sometimes when you hear little snippets that one counselor will use and you keep that in your mind like, "Oh, I really liked that, I think I'm going to use that," and it's great to kind of have them from multiple people so you can kind of become a meld of everything that other counselors do without just imitating one person.* (LA participant)

> *I think that it was really great to be able to start off at zero, really from scratch, and observe a supervisor doing sessions, but then have this transformation throughout the summer to where by the end she was the one observing me, and it was really great to be able to do that in kind of like a stepwise fashion, like gradually getting there.* (LA participant)

Category 2: Increased self-awareness (Total n = 2; LA= 1; HA= 1). Two participants commented on their increased ability to assess their own strengths and limitations due to supervisors who encouraged these skills. For example, "...I've been able to identify many areas that I can improve upon or, you know, point out areas that I have done well in" (HA participant).

Domain 3: Supervisor characteristics (Total *n* = 4; LA= 1; HA= 3). Five participants referenced specific characteristics of supervisors related to good supervision, such as broad clinical experience, enthusiasm, empathy, and patience. For example, "I think just being with someone who is really knowledgeable about the field is extremely positive" (HA participant) and:

> *I guess having someone who's been there before and knows what you're going through and that it's not always easy. That you're still learning things, and most of the time a situation that you encounter, your supervisor has already been in, whether it's been last year, last month, or 10 years ago.* (LA participant)

Interview Question 3b: What have been the most difficult things about clinical supervision?

Responses to this question yielded four domains: communication with supervisor, lack of control, affective experiences, and students' perceptions of supervisors.

Domain 1: Communication with supervisor (Total *n* = 14; LA= 5; HA= 9). Many students described challenges related to communicating with their supervisors, especially surrounding issues of feedback and expectations. This domain includes three categories.

Category 1: Unclear expectations (Total n = 6; LA= 2; HA= 4). Participants in this category mentioned not knowing what was expected of them at given times and discussed how they felt lack of clarity made it more difficult for them to progress as genetic counselors.

> *I think supervisors who don't communicate well and who don't tell you what their expectations are and then, you know, kind of give you feedback that you're not following their expectations when they haven't actually been clear on what they were to begin with…* (LA participant)
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> *…especially in the beginning when I'm not sure like what I'm doing because whenever we switch rotations it's hard to know when you get into a new setting what's expected of you and how things are different in that setting than they were in the previous setting or whatever. So sometimes if the supervisor isn't, like, if they don't communicate very well, they don't really tell me what they want, then I find that difficult.* (HA participant)

Category 2: Lack of feedback (Total n = 6; LA= 2; HA= 4). These students spoke about not receiving enough feedback from their supervisors to accurately gauge how well they were progressing or being surprised by summative evaluations.

> *The most challenging have been when you feel like you're pulling teeth to get feedback. Even if I do a good job I, there's something that I must need to improve on, and so the supervisors that really don't give a lot of feedback are challenging because the feedback after sessions just takes longer to try and piece out exactly what went well from their perspective and what didn't go well from their perspective.* (LA participant)
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> *I think when they don't give us any feedback after watching what we're doing. Especially during my prenatal rotation, I felt like I didn't really hear a whole lot back during the semester, and then at the end of the semester evaluation I didn't get very high marks, and I was a little bit blindsided because…nobody had been talking to me along the way about these things…* (HA participant)

Category 3: Accepting constructive feedback (Total n = 3; LA= 1; HA= 2). A few students discussed the difficulty of hearing constructive feedback, especially when it conflicts with their evaluation of the session, when they feel the supervisor is nitpicking, or they struggle to not take professional criticism personally. For example, "…sometimes it can be very challenging to hear things that you didn't do so well" (HA participant).

Domain 2: Affective experiences (Total *n* = 12; LA= 4; HA= 8). Participants in this domain described their emotional reactions to supervision as being the most difficult aspects of clinical supervision. Their comments focused on negative emotions and/or struggles to reconcile their intellectual understanding of the value of supervision with their affective experiences. There are two categories.

Category 1: Stress/anxiety (Total n = 10; LA= 4; HA= 6). These participants mentioned feeling stress or anxiety, often explicitly relating these feelings to evaluations or being judged by their supervisors. Some students mentioned the live supervision aspect of clinical supervision as heightening their stress. One, however, commented that stress and anxiety varied by supervisor, and two acknowledged evaluation is part of a supervisor's role. For example, "…it was a rotation in which there were four different supervisors so I didn't have the, I found that in general pretty anxiety provoking…" (HA Participant) and:

> *I think it can also be challenging when you're in the session and you know that your supervisor is there, sitting, watching you, listening to every word you say. I think it's much more stressful than if you're in a session by yourself and, you know, you're constantly evaluating, "Did I say the right thing? Did I use the right words? Is my supervisor gonna think I should've done this better? I just said this, but my supervisor's going to know it's that, and is going to call me out on it later." So I think that it's good to have a supervisor there, but I also think that it definitely adds a layer of stress.* (LA participant)

Category 2: Ambivalence (Total n = 2; LA= 0; HA= 2). Two participants discussed knowing intellectually the difficult aspects of supervision make them better genetic counselors, but they expressed mixed feelings about the frequency of supervision or supervisors who they feel interrupt their flow in session. For example, "I think one of the main challenges with clinical supervision is knowing that it's necessary, but at the same time not really wanting to receive it after every single case…" (HA participant).

Domain 3: Lack of control (Total n = 10; LA= 5; HA= 5). Many participants described situations where they were unable to exert the control and independence they desired, either because of their status as students, they perceived their supervisors as controlling, or due to logistical issues. This domain includes three categories.

Category 1: Student status (Total n = 5; LA= 2; HA= 3). These participants brought up situations where they perceived themselves as ready for more responsibilities or independence than they were allowed because of their student status.

> *…although I may not know a whole lot about the genetic counseling profession, I feel like I have a lot of other things to offer and…it would be nice to be able to be treated less like a student and more like a, not necessarily a colleague, but somebody who also has a background and a knowledge that should, I think, be at least acknowledged.* (HA participant)
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> *But when you go to a new location the supervisors there have their specific ideas about what they want you to do and what they want you to say. So in a way, sometimes supervisors can actually kind of dampen your*

independence because they're enforcing on you the ways that they want to do things even though you've sort of been developing your own way, and that has been a difficulty. (HA participant)

Category 2: Perceived intrusions (Total n = 3; LA= 1; HA= 2). Participants in this category expressed frustration with what they perceived as supervisors taking control of sessions. They used words like "taken away" to describe a session in which the supervisor took control unexpectedly.

I would say the most challenging thing was to be patient when counselors would step in when I thought, "I am just about to get to that point," and they would step in and go ahead and say it even though I was sort of getting there, maybe just a little more slowly, so I think I appreciate a little more independence even if I look like I'm struggling for a couple of minutes. (LA participant)

Category 3: Logistical realities (Total n = 3; LA= 2; HA= 1). Three participants brought up challenges associated with the way clinical rotations and supervision are conducted. These challenges include difficulty establishing rapport because a supervisor is in the sessions, and scheduling difficulties.

I would say sometimes it was harder to focus, well, my supervisor has had long-term relationships with almost all of the patients that we saw, so sometimes it was hard for me to develop a rapport with the patients when she was in the room because they knew her and they wanted to give her the update as opposed to interact with me. So that was one of the hardest things was when she was in the room, really commanding, for me it was

harder to command the session when she was in the room because she had developed a relationship with the patient. (LA participant)

Domain 4: Working with multiple supervisors (Total *n* = 7; LA= 3; HA= 4). Participants in this domain brought up issues related to having multiple supervisors, specifically managing the variety of supervisor styles and expectations or concerns about a supervisor's credibility. This domain includes two categories.

Category 1: Managing multiple styles and expectations (Total n = 6; LA= 3; HA= 3). Several interviewees considered it challenging to integrate feedback from multiple sources which were sometimes contradictory, keep straight the expectations of their various supervisors, or discern what feedback was due to stylistic differences versus core skills. For example, "So it sounds like maybe that's a difference between kind of the supervisor's style and kind of sorting out what's style versus what's kind of 'correct' counseling" (HA participant) and:

…the most difficult and the best at the same time is having multiple supervisors. A lot of them want different things from you. Some people like a very thorough counseling outline and want to know word for word what you're going to say before you go in, whereas other counselors might kind of say "Just give me bullet points, that's fine." So I think just having to know what supervisor you have and kind of what they like to see from you before you go in. And then just that their styles are different and so they might recognize that you did something that they wouldn't have done personally, but they can say if they thought it worked or if it didn't work. So while I think it's a good thing also, it is hard because you do

have to keep in mind who your supervisor is at the time, and kind of how they do their supervision, and what they like to see from their students. (LA participant)

Category 2: Perceived supervisor credibility/feedback validity (Total n = 3; LA= 0; HA= 3). Four participants expressed concerns that some of their supervisors may not be good sources of information because of the supervisor's lack of clinical experience or a lack of interactions between the student and supervisor. For example, "[Referring to receipt of constant feedback, this interviewee stated]…sometimes it's a bit of a difficult pill to swallow, and [from] a genetic counselor who is not much older than me" (HA participant).

Summary of Responses Related to Perceptions of Supervision Experiences

Table 5 summarizes the response patterns for each anxiety group. Both groups had more participants describe themselves as moderately satisfied than highly satisfied, but again no participants described having low satisfaction. Students in both groups also focused primarily on things they felt their supervisors provide as the most positive aspect of supervision, while rarely mentioning supervisor characteristics. Advice or feedback from supervisors was commonly seen as a positive aspect of supervision, while seeing supervisors as a source of challenge or a second set of eyes in the room were only endorsed by a few participants per group. Issues related to feeling a lack of control were somewhat commonly mentioned as negative aspects of supervision across groups, as were feelings of anxiety or stress (particularly around evaluation). Communication problems with supervisors focused on feedback and expectations.

Table 5

Domain and Category Frequency Labels for Interview Questions 3, 3a, and 3b

Domain/*Category*	Total		Low		High	
	n	**Type**	***n***	**Type**	***n***	**Type**
Question 3: Overall, how satisfied are you with the clinical supervision you have received?						
Moderately Satisfied	16	Typical	7	Typical	9	Typical
Highly Satisfied	10	Variant	4	Variant	6	Variant
Question 3a: What have been the most positive things about clinical supervision?						
Supervisor guidance and support	25	Typical	11	General	14	General
A source of comfort/ support	*15*	*Variant*	*7*	*Typical*	*8*	*Typical*
Advice/feedback	*14*	*Typical*	*7*	*Typical*	*7*	*Variant*
A source of confidence/trust	*7*	*Variant*	*3*	*Variant*	*4*	*Variant*
A second set of eyes	*3*	*Variant*	*1*	*Rare*	*2*	*Rare*
A source of challenge	*3*	*Variant*	*2*	*Rare*	*1*	*Rare*
Supervisee growth	9	Variant	5	Variant	4	Variant
Professional growth	*9*	*Variant*	*5*	*Variant*	*4*	*Variant*
Increased self-awareness	*2*	*Rare*	*1*	*Rare*	*1*	*Rare*
Supervisor Characteristics	4	Variant	1	Rare	3	Variant
Question 3b: What have been the most challenging things about clinical supervision?						
Communication with Supervisor*	14	Variant	5	Variant	9	Typical
Lack of feedback	*6*	*Variant*	*2*	*Rare*	*4*	*Variant*
Unclear expectations	*6*	*Variant*	*2*	*Rare*	*4*	*Variant*
Accepting constructive feedback	*3*	*Variant*	*1*	*Rare*	*2*	*Rare*
Affective Experiences*	12	Variant	4	Variant	8	Typical
Stress/anxiety	*10*	*Variant*	*4*	*Variant*	*6*	*Variant*
Ambivalence	*2*	*Rare*	*0*	--	*2*	*Rare*
Lack of Control	10	Variant	5	Variant	5	Variant
Student status	*5*	*Variant*	*2*	*Rare*	*3*	*Variant*
Of the supervisor	*4*	*Variant*	*2*	*Rare*	*2*	*Rare*
Reality of logistics	*2*	*Rare*	*1*	*Rare*	*1*	*Rare*
Working with Multiple Supervisors	7	Variant	3	Variant	4	Variant
Managing multiple styles and expectations	*6*	*Variant*	*3*	*Variant*	*3*	*Variant*
*Perceived supervisor credibility/feedback validity**	*3*	*Variant*	*0*	--	*3*	*Variant*

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

No domains or categories met the criteria for strong likelihood of differences. Two domains and one category met criteria for moderate likelihood of differences between groups. When discussing challenging aspects of supervision, the high anxiety group was more likely to bring up communication issues with their supervisors, describe emotions as challenging, and question the validity of supervisor feedback or the supervisor's qualifications.

Summary of Research Question 1: Are there differences among levels of anxiety in student satisfaction with supervision or their clinical rotations in general?

In general, interviewees described higher levels of satisfaction with their overall rotation experience than with supervision specifically. It is noteworthy, however, that all participants described themselves as at least moderately satisfied, and no one had an overall negative perception of supervision. Supervision was commonly seen as one of the most positive aspects of rotations, and students particularly highlighted the advice and feedback they received from supervisors. Feedback was also one of the primary types of communication issues brought up between students and supervisors. Not surprisingly, the low anxiety group was less likely to list managing anxiety as the most challenging aspect of rotations, but no difference between groups was found when asked the same question about supervision. The high anxiety group was more likely to discuss communication issues with their supervisor when specifically asked about supervision, but no differences were found on this topic when participants were asked about rotations in general.

Research Question 2: Are there differences among levels of anxiety in terms of dealing with patients?

Interview Question 2: What kind of patients have been, or do you think will be, the hardest for you to work with? Why?

Responses to this question yielded six domains: difficult clinical populations, disengaged patients, adapting to patients' knowledge base, resistant/unreceptive patients, emotional patients, and over-identification.

Domain 1: Difficult clinical populations (Total *n* = 10; LA = 3; HA = 7). These participants noted specific clinical populations they found challenging, either due to the complexity or prognosis of the conditions, or their own emotional reactions to the patients. Three participants discussed a population they hypothesized would be the most challenging.

> *I think the patients that will be the hardest for me to work with will be ones to whom I have to give very bad news such as a positive diagnosis of a genetic finding of Huntington Disease, an inevitable finding.* (LA participant)
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>
> *Seeing patients who are in high stress situations, so acutely high stress situations. So individuals who are in prenatal, I find that a little bit more stressful as opposed to individuals who are in adult genetics where they've had a genetic condition their whole life and now are just getting a diagnosis, a little more relaxed of a setting rather than somebody who's pregnant and there's something that is potentially going wrong with their*

pregnancy. There's that sense of urgency, and that's also a little bit more stressful for me as well. (HA participant)

Domain 2: Disengaged patients (Total *n* = 9; LA = 6; HA = 3). Students in this domain described patients with whom it is difficult to engage due to the patient's flat affect, lack of rapport, or disinterest in the counseling process. For example, "I think the patients that I always have the hardest time with are the ones that are the least emotionally responsive" (HA participant) and:

I tended to do really well with all the patients that were super involved with their kids, that were really worried, and then I just struggled a lot to develop rapport with people that kind of didn't care to be there, didn't have any interest in the session, and I'm really bad at working a relationship with people like that. (HA participant)

Domain 3: Adapting to patients' knowledge base (Total *n* = 5; LA = 2; HA = 3). Students in this domain commented on the difficulty of changing the way they communicate with patients based on the patients' understanding of genetics prior to the session. This domain includes two categories.

Category 1: Unfamiliar with genetic lexicon (Total n = 4; LA = 2; HA = 2). A few students commented on working with patients who did not have basic terminology related to genetics, either because of limited education or language barriers. For example, "Probably some of the most challenging cases I saw this summer were patients who don't speak English very well or don't speak English as a first language…the language barrier was definitely a challenge there…" (LA participant) and:

> *I think the patients with the least education, so like patients who haven't completed high school, for instance, have been challenging to me so far because I am…used to talking to all of these doctors and genetic counselors with, you know, high advanced medical knowledge, and then you go to sit down with a patient who hasn't had any of that, and you have to sort of break it down into small or easier to understand terminology, and that can be a challenge for me.* (LA participant)

Category 2: Highly educated (Total n = 1; LA = 0; HA = 1). One interviewee discussed the difficulty of working with patients who held advanced degrees (e.g., in the sciences, statistics, or law), explaining these patients often ask challenging questions and sometimes mistakenly believe they understand the basics of genetics.

> *…it's just a high stress environment, and there's that chance of what if they ask a question that I just don't know as opposed to somebody else who I'm counseling the exact same condition, they won't even care about some of the specific facts, so they won't care about some of the very, very specific numbers. They want the whole global general picture, and that's easier to do; it's easier to give that to a patient rather than a patient constantly asking you questions and, you know, maybe sometimes putting you on what seems like the defensive even though both patients, whether they're a lawyer or not, have that same common goal of wanting to know the information. There's just different ways that the patient will go about trying to retrieve that information.* (HA participant)

Domain 4: Resistant/unreceptive patients (Total *n* = 6; LA = 2; HA = 4). Interviewees in this domain described patients who exhibit behaviors the students perceived as disrupting their plan for the session. Some examples include being "off topic", asking unexpected questions, being unfriendly, or being uncomfortable working with a student. For example, "When you're asking [patients] questions [and] they don't see any utility in the question you're asking so they don't really want to answer. They think they're stupid questions or irrelevant and why are you wasting their time. They're sort of aggressive almost…" (LA participant) and:

> *So it's maybe for instance someone who, because of their belief system, is saying "Had somebody told me that this was a genetics referral I would not have come," and so somebody who's kind of angry or defensive and doesn't want to be there in the first place. So it's like trying to provide services to someone who now I'm in the position of having to explain this test result, but it's a test that this person would not voluntarily have had done had it been explained to them.* (HA participant)

Domain 5: Emotional patients (Total *n* = 4; LA= 1; HA= 3). A few students mentioned patients who displayed strong emotions during the session, particularly anger or sadness, and the students did not know how to respond. For example, "I think all of us are afraid of patients with strong emotions so I think that will be the most difficult. And even ones that provoke some emotions in us…just those that tug at your heart strings a little…" (HA participant) and:

> *Either having denial about something or being super upset about something and crying during a session, and also not being able to really*

> *hear what we have to say because of their emotional blockades that they put up before the session…I guess I just feel like I don't know what to say. Even though I know technically what strategies there are out there to deal with that, I just kind of [draw a] blank…when I start talking to them and I don't really know what I'm supposed to be doing…* (HA participant)

Domain 6: Over-Identification (Total *n* = 1; LA = 1; HA = 0). One participant found it difficult to work with patients who were similar to themselves in terms of age or life situation. The participant said "So far the patients that have been hardest for me have been those that are closet to my same age and kind of, who are in the same place in their lives as me" (LA participant).

Summary of Research Question 2: Are there differences among levels of anxiety in terms of dealing with patients?

Table 6 summarizes the response patterns for each anxiety group. Both groups tended to find certain populations challenging. Interestingly, patients who were disengaged in session were more frequently described as challenging than those who were resistant or unreceptive to treatment in some way. No differences between groups were found related to challenging patients.

Research Question 3: Are there differences between levels of anxiety in perceptions of supervisors?

Interview Question 4: How would you describe a good supervisor?

Responses to this question yielded two domains: supervisor behavior and supervisor characteristics.

Table 6

Domain and Category Frequency Labels for Interview Question 2: What Kind of Patients Have Been, or Do You Think Will Be, The Hardest for You To Work With? Why?

Domain	Total		Low		High	
	n	**Type**	***n***	**Type**	***n***	**Type**
Difficult Clinical Populations	10	Variant	3	Variant	7	Variant
Disengaged Patients	9	Variant	6	Variant	3	Variant
Resistant/Unreceptive Patients	6	Variant	2	Rare	4	Variant
Adapting to Patients' Knowledge Base	5	Variant	2	Rare	3	Variant
Unfamiliar with genetic lexicon	*4*	*Variant*	*2*	*Rare*	*2*	*Rare*
Highly educated	*1*	*Variant*	*0*	--	*1*	*Rare*
Emotional Patients	4	Variant	1	Rare	3	Variant
Over-Identification	1	Rare	1	Rare	0	--

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few.

Domain 1: Supervisor behavior (Total *n* = 27; LA= 12; HA= 15). Almost every student commented on what a good supervisor provides for their supervisees. This domain includes five categories describing specific supervisor behaviors that students view as beneficial.

Category 1: Provide balanced feedback (Total n = 16; LA= 9; HA= 7). Many interviewees highlighted the need for positive as well as constructive feedback from supervisors, noting the absence of either makes it difficult to assess their abilities accurately. For example, I think somebody who is willing to offer constructive criticism by also balancing it with the positive things that you're doing" (HA participant) and "I think a good supervisor is one who is able to…point out a few skills that need to be worked on and a few things that were done well…" (LA participant).

Category 2: Balance support & challenge (Total n = 10; LA= 4; HA= 6). These participants discussed a supervisor's ability to know when to push the supervisee to try something new while maintaining a positive, encouraging environment.

> *I think a good supervisor really sort of knows where you're at and lets you do as much of the session as you feel comfortable with, but I think also can push you out of your comfort zone and recognize when you are ready to do things that you might not necessarily think you are.* (LA participant)
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> ---
>
> *I think there can be different types of good supervisors but I would say that the characteristics across the board would be overall positive and encouraging and open as well as a good balance between knowing when to push you beyond your comfort zone but also not throwing you into something that you're not ready for.* (LA participant)

Category 3: Set clear/explicit expectations (Total n = 6; LA= 2; HA= 4). A number of interviewees indicated good supervisors lay out expectations clearly and explicitly, both for the rotation as a whole and for individual sessions. For example, "Someone who communicates well and is very open and honest about what they expect from you…" (LA participant) and:

> *You know, we were able to sit down and talk about our expectations of each other because each student, each person, each supervisor is different and so it was very reassuring to me to know what she expected of me and for her to know and also to listen to me and for her to know what I needed from a supervisor so that was great.* (HA participant)

Category 4: Provide room to grow (Total n = 6; LA= 2; HA= 4). These students mentioned supervisors who gave supervisees time in session to try to self-correct or work

through mistakes before jumping in to make corrections, or generally allow for more independence.

> *…they actually let you learn by doing and so they're willing to kind of give up their own role as a genetic counselor and let you maybe fumble around and figure things out for yourself because that's really important, just them being able to kind of step back and not always jump in and do it the way that they want to do it but to kind of let you find your own path.* (HA participant)

> *I would describe her as someone who, who's open-minded, like, who doesn't necessarily impose his or her own ways on, on, on his or her students because, you know, counseling is not math, not like not everything has to be done the same way…* (HA participant)

Category 5: Give specific feedback (Total n = 5; LA= 3; HA= 2). A few participants noted that good supervisors include concrete examples in their feedback, whether positive or corrective:

> *…it's important for a supervisor to give really clear and concrete feedback. I think it's really hard to get negative feedback that's kind of vague to know how to improve from it, so I like really concrete feedback like, "You asked this question in this way, I think it would be better if you worded it differently like this," rather than saying, "You know, some of your questions were, didn't work." I like to know specifically what didn't*

work about them and how I can do something different in the future to improve that. (LA participant)

Well, if they give short answers or short responses to feedback where it's just, "I think it went well," or "I think you need to work on asking questions for your pedigree," meaning too little information or too much information gathered during a family history. If I don't know that I'm taking too much information or too little it's hard to then determine how to effectively do better next time. (LA participant)

Domain 2: Supervisor characteristics (Total *n* = 15; LA= 8; HA=7). Many interviewees identified personal qualities of a good supervisor. This domain includes six categories.

Category 1: Available (Total n = 6; LA= 4; HA= 3). These interviewees described supervisors who took time to answer the supervisees' questions, were easy to find when needed, and were perceived by the supervisees as invested in their success.

I think that that is a mark of a good supervisor that even though they have all of these responsibilities in their own job, they can really take the time to answer the students' questions, to help them feel comfortable in the clinic, to…point out in a constructive way things that the student can change. (LA participant)

Someone who is easy to get a hold of with questions and who takes the time after each appointment and talks to you about what you think you did

well, what they think you may need to work on, constructively of course but it is helpful to have someone who is open to talking about that rather than just saying oh, if you've got time, and moving on. (LA participant)

Category 2: Supportive/encouraging (Total n = 5; LA= 3; HA= 2). These participants described good supervisors as having positive attitudes and believing in their supervisees' abilities. For example, "Someone who is supportive" (LA participant) and "Recognizing what we need and providing it while also helping our confidence by saying the things that we've done well" (HA participant).

Category 3: Kind/caring/compassionate (Total n = 3; LA= 1; HA= 2). These participants commented on supervisors who help their supervisees feel cared about as people or supervisors who displayed kindness. For example, "…mostly someone who is obviously on your side and cares about you…" (HA participant).

Category 4: Miscellaneous (Total n = 3; LA= 2; HA= 1). Three students described a good supervisor as honest, collegial, an articulate communicator, and good listener.

Category 5: Role model (Total n = 2; LA= 2; HA= 0). Two participants mentioned supervisors who lead by example, are experienced, and are respected by their peers and supervisees. For example, "Someone who has had more than a couple of years of experience so they have seen a large number of patients come through and they have a pretty diverse experience" (LA participant).

Category 6: Flexible/open-minded (Total n = 2; LA= 0; HA= 2). Two students discussed supervisors who were flexible enough to allow supervisees to do things differently than the supervisor would do them.

> *I think somebody who allows you to kind of bring your own personality and bring your own style of counseling into a session and allows you to conduct the session in a way that you feel like you would've done it, as long as it's in no way harming the patient because I think that it's really hard to feel like you have to fit in the way the supervisor counsels.* (HA participant)

Interview Question 7: What kind of supervisor has been the most difficult for you to work with? Why?

Responses to this question yielded three domains: supervision processes, supervisory relationship, and supervisor inflexibility.

Domain 1: Supervision processes (Total *n* = 17; LA= 8; HA= 9). Students in this domain commented on problematic processes in supervision, typically focusing on supervisory behaviors which made the experience difficult for them. This domain includes four categories.

Category 1: Unbalanced feedback (Total n = 8; LA= 4; HA= 4). A number of students referenced supervisors who provide feedback that is heavily skewed toward, or solely consisting of, what they termed "constructive feedback." Four participants described what they thought would be challenging supervisors rather than actual experiences.

> *I guess the one who has the too many things to point out per session and not sensitive to how that feels getting that kind of feedback…you're supposed to do the sandwich thing, you know, "You did this well, here are*

3 things to work on, and you did that well," and sometimes it feels like the sandwich is just all meat and no bread… (LA participant)

Like I said, I'm really sensitive. I take, like, criticism really personally sometimes so I think if I was just getting really negative feedback after every single session and I kind of felt like, if I started to feel like I couldn't do anything right I think that I would probably just completely shut down. I just don't think I would work very well in that environment. (HA participant)

Category 2: Inconsistent/unclear expectations (Total n = 4; LA= 1; HA= 3). A few participants mentioned supervisors who either did not explain their expectations clearly initially, changed their expectations without warning, or exhibited other communication difficulties.

… [My supervisor] didn't really communicate her expectations but also what she wanted one day was very different from what she wanted the next…she would tell me to do something one way one day and then when I did that she would criticize me for it the next… (LA participant)

Really someone who is not good at communicating…they just kind of don't relay their expectations of you, or if something is amiss and they don't tell you, and I think that is kind of my worst, my worst nightmare of a supervisor… (HA participant)

Category 3: Vague or missing feedback (Total n = 4; LA= 2; HA= 2). A few interviewees mentioned the importance of receiving specific feedback or the negative impact of missing feedback. For example, "If you don't get any feedback then it's hard to know where you stand sort of, and so you don't know, "Do I try harder? Do I need to do this, or should I not do this?" (LA participant) and:

> *I just want to be able to feel like I'm making steps and making progress in my counseling skills because I really have had supervisors that say specific things to improve upon and [I can] work that in [to my sessions] and felt like that was a success, so I think…I wouldn't feel as accomplished if I wasn't able to receive feedback.* (HA participant)

Category 4: Inappropriate supervision (Total n = 3; LA= 2; HA= 1). Three students described situations they perceived as not appropriate for supervision. One referenced a supervisor who consistently brought office politics into supervision sessions, one commented on supervisors who did not have time to debrief sessions, and the other had an ethical disagreement with her supervisor.

> *Actually I think the supervisor who I'm always going to find the most challenging to work with…and the reason why I find her so challenging to work with is because I don't agree with a lot of the things that she does…to the point where I'm really uncomfortable from an ethical standpoint of the way she runs things. So, when she's supervising me and I, if I want to say something else or go into more detail, she says, "No, you don't, you don't have to do that," or "I don't want you to do that," even though I feel that ethically not going into more detail is not appropriate in*

that situation…I can't go against her because she's my supervisor, but I feel that the patient is suffering because of that. (HA participant)

Domain 2: Supervisory relationship (Total *n* = 11; LA= 3; HA= 8). A number of participants identified issues of trust and rapport with the supervisor. In particular, they focused on the consequences when these critical aspects are missing. This domain includes two categories.

Category 1: Lacking comfort or connection (Total n = 7; LA= 1; HA= 6). These participants indicated supervisors who they did not feel connected to or comfortable around would represent the most challenging situation. For example, "I don't necessarily have to be agreed with but it'd be nice to be able to feel comfortable enough to be able to voice that" (HA participant) and:

Someone who didn't, didn't feel like I had any kind of rapport with…So I guess that's the most frustrating for me but it is really important that I feel comfortable with them because then I wouldn't feel comfortable with them being in the room… (HA participant)

Category 2: Feeling held back (Total n = 7; LA= 2; HA= 5). Interviewees in this category commented on the importance of supervisors' conveying confidence in the student's ability. They sometimes highlighted frustration with interruptions by supervisors, and some mentioned how supervisors' assumptions can hinder students' progress. Three students in this category described hypothetical supervisors.

[Regarding supervisor "step in" during genetic counseling session]: That's frustrating because it makes me look like I don't know what I am

talking about and I want them to trust me enough to wait that extra half a second even if they already know what I should say. (LA participant)

Most challenging to work with I think would be someone who assumes the worst of the student before they've given the student an opportunity…[and treating] you like you're first starting off and very, very basic which sometimes can be difficult… (HA participant)

Domain 3: Supervisor inflexibility (Total *n* = 6; LA= 3; HA= 3). Students in this domain discussed supervisors who wanted everything done in a very specific manner and did not allow the supervisee to express themselves in their work. Over half of these participants (four), however, spoke about experiences they heard from other students or were speculating about what would be most difficult, including two who referenced having to talk from a script. For example, "I find it difficult to work with supervisors who don't…make room for much, kind of give and take…" (HA participant) and:

I think for me probably the most difficult is someone who is not at all flexible, very rigid in expectations, very rigid in how they think sessions should go, and those kinds of things. And I haven't had a supervisor like that yet, but some of my peers have had them, and it just sounds like it would be a bit of a nightmare for me, just given the way that I work…I am very detail-oriented and meticulous about my work…but at the same time flexibility is key to me. I don't like having to talk from a script in a session. Of course there's an outline, but there's not a script, and…peers of mine have had supervisors where it's basically been a script, and if they

don't regurgitate it, they've done it wrong, and that's just not, doesn't sound like a very…good environment to work in. (LA participant)

Summary of Research Question 3: Are there differences among levels of anxiety in perceptions of supervisors?

Table 7 summarizes the response patterns for each anxiety group. Both groups focused more on supervisors' behaviors than supervisor characteristics when talking about what comprises a "good supervisor," and more on supervision processes than the relationship when describing difficult supervisors. The most common positive behaviors reported involved balance, either in terms of feedback or support and challenge. The balance between positive and corrective feedback appeared to be particularly important, as unbalanced feedback was the most commonly mentioned descriptor of difficult supervisors. The most common characteristics of good supervisors were being available and supportive, while the only characteristic of difficult supervisors highlighted was inflexibility. The only domain which met criteria for moderate likelihood of differences was the high anxiety group being more likely to discuss the supervisory relationship when commenting on the most difficult supervisor with whom to work. Both categories within this domain also met criteria.

Table 7

Domain and Category Frequency Labels for Interview Questions 4 and 7

Domain	Total		Low		High	
	n	Type	*n*	Type	*n*	Type
Question 4: How would you describe a good supervisor?						
Supervisor behavior	27	Typical	12	General	15	General
Provide balanced feedback	*16*	*Typical*	*9*	*Typical*	*7*	*Variant*
Balance support & challenge	*10*	*Variant*	*4*	*Variant*	*6*	*Variant*
Set clear/explicit expectations	*6*	*Variant*	*2*	*Rare*	*4*	*Variant*
Provide room to grow	*6*	*Variant*	*2*	*Rare*	*4*	*Variant*
Give specific feedback	*5*	*Variant*	*3*	*Variant*	*2*	*Rare*
Supervisor Characteristics	15	Typical	8	Typical	7	Variant
Available	*7*	*Variant*	*4*	*Variant*	*3*	*Variant*
Supportive/ encouraging	*5*	*Variant*	*3*	*Variant*	*2*	*Rare*
Kind/caring/ compassionate	*3*	*Rare*	*1*	*Rare*	*2*	*Rare*
Miscellaneous	*3*	*Rare*	*2*	*Rare*	*1*	*Rare*
Role Model	*2*	*Rare*	*2*	*Rare*	*0*	--
Flexible/open-minded	*2*	*Variant*	*0*	--	*2*	*Rare*
Question 7: What kind of supervisor has been the most difficult for you to work with? Why?						
Supervision Processes	23	Typical	8	Typical	9	Typical
Unbalanced feedback	*11*	*Variant*	*4*	*Variant*	*4*	*Variant*
Inconsistent/unclear expectations	*7*	*Variant*	*1*	*Rare*	*3*	*Variant*
Vague or missing feedback	*5*	*Variant*	*2*	*Rare*	*2*	*Rare*
Inappropriate supervision	*3*	*Rare*	*2*	*Rare*	*1*	*Rare*
Supervisory Relationship*	16	Variant	3	Variant	8	Typical
*Lacking comfort or connection**	*11*	*Variant*	*1*	*Rare*	*6*	*Variant*
*Feeling held back**	*8*	*Variant*	*2*	*Rare*	*5*	*Variant*
Supervisor Inflexibility	7	Variant	3	Variant	3	Variant

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety group.

Research Question 4: Are there differences among levels of anxiety in the perceptions of the structure or logistics of supervision?

Interview Question 5a: What are the advantages of having your supervisor sit in on sessions with you?

Responses to this question yielded three domains of student perceptions of the advantages of having their supervisor sit in on sessions with them: safety net, improves training, and quality assurance for patients.

Domain 1: Safety net (Total *n* = 24; LA= 13; HA= 11). A large majority of student commented that the supervisor's presence provides several forms of back up and support for them. This domain includes three categories.

Category 1: Information (Total n = 18; LA= 11; HA= 7). Many interviewees mentioned times when they had either not known or been unsure about the answer to a patient's question. For example, "Knowing that I have the expert in the room for when I get asked a question I don't know the answer to" (HA participant) and:

> *They've been there to help me out if I either say something incorrectly or I don't know the answer to a patient's question, then I turn to my supervisor, and they're willing to step in, so it's good to have them in the session at that time…* (LA participant)

Category 2: Guidance (Total n = 7; LA= 2; HA= 5). A number of participants spoke of the ability of the supervisor to help them when they do not know what to do or are uncertain during a session. For example, "They are able to jump in at any point where I feel like I need extra help or if I'm lost…" (HA participant) and "I know that they're there in case something comes up that I'm not sure how to handle" (LA participant).

Category 3: Confidence/comfort (Total n = 6; LA= 3; HA= 3). Several students noted feeling more certain patients would leave with all the necessary information, more confident what they said had been correct, and more comfortable interacting with the

patient. For example, "And also just the physical presence of someone else who is there as this kind of safety net just puts me more at ease" (LA participant) and

> *Physically in the session I get the confidence that everything that I say in a session kind of has that seal of approval, and I'm not doubting my information, and I'm not doubting the way that I'm portraying that information. I know that there is another set of ears acting as a backup for me…* (HA participant)

Domain 2: Improves training (Total *n* = 15; LA= 6; HA= 9). Participants in this domain indicated the supervisors' presence increased the quality of their training. There are two categories.

Category 1: First-hand feedback and evaluations (Total n = 11; LA= 5; HA= 6). Many interviewees mentioned the supervisors have first-hand knowledge of their skills and the full context of situations that arose in sessions.

> *Well, they can directly observe what I'm doing instead of me having to like tell them afterwards because I feel like they don't know exactly what happened in a session. They can also feel…a shift of emotions in the room and get their own sense of what's going on, because during a counseling session it's not just like what's being said, it's also body language and emotions and stuff, so like, if I thought the patient was being distant, but maybe my supervisor thought the patient was just having an emotional moment ,or we can have different takes on stuff, so it's nice for them to be there and see what's going on, and then we can compare notes afterwards.* (HA participant)

…you don't necessarily focus as much on word phrasing or mannerisms or, you know, on verbal cues that you might be coming across, and so I think for supervisors who are not actively participating in a session, they're more just observing you conducting a session, they have a much better sense in how you are coming across nonverbally and can sort of draw your attention to those sorts of things after the session. (LA participant)

Category 2: Notice student blind spots (Total n = 6; LA= 1; HA= 5). A few students spoke about supervisors' ability to notice things outside the awareness of the supervisee.

Well, they tend to notice things that I may not be aware of. You know, I might come out of a session saying, "That was really awesome," or "That was really terrible," but I couldn't necessarily say why, and they always would notice the things that…I may not have noticed. (LA participant)

…a lot of times there are things that I don't even realize that I've done, like, just words that I've thrown in, or that I talk really fast, things like that, that I hadn't even recognized that I was doing that she can point out. (HA participant)

Domain 3: Quality assurance for patients (Total *n* = 7; LA= 5; HA= 2). Participants in this domain commented on the benefits to the patient of having the supervisor in the room, including stronger feelings of safety, confidence that the

information provided is correct due to the supervisor's expertise, and satisfaction with the quality of care. For example, "I think having the supervisor involved in the counseling in some aspects makes the patient feel more safe that, you know, they're not just getting counseled by a student…" (LA participant) and:

> *I think it can make a patient more comfortable, especially because I feel like I do look like a student and I do introduce myself as a student, and so the patient might feel like, "Okay, it's fine if a student's here, but it'd be nice to have someone who's also…well-trained and a professional to be in the room just in case I do have a difficult question," or something like that.* (LA participant)

Interview Question 5b: What have been the disadvantages of having your supervisor sit in on sessions with you?

Responses to this question yielded three domains of student perceptions of the disadvantages of having their supervisor sit in on sessions with them: internal reactions, session dynamics, and overly critical/nitpicking.

Domain 1: Internal reactions (Total *n* = 22; LA= 10; HA= 12). Participants in this domain focused on their personal cognitive and affective experiences during sessions in describing disadvantages of having their supervisor present. This domain includes three categories.

Category 1: Stress/anxiety of being watched (Total n = 19; LA= 8; HA= 11). A large number of interviewees commented on feeling additional stress, anxiety, nervousness, pressure, and self-consciousness during sessions. For example, "Well, the

obvious one would be you feel like someone is breathing down your back all the time…Just that feeling of always being watched…" (HA participant) and:

> *Sometimes it can be a little distracting. A lot of supervisors will take notes, and so if I can see them taking notes it will kind of distract me a little bit, and I'm wondering what they're writing or what they noticed, and so then I'm focusing more on that than the actual session with the patient.* (LA participant)

Category 2: Lack of independence (Total n = 5; LA= 3; HA= 2). A few students expressed frustration with not being able to direct sessions, because either of supervisor "step-ins," patients wanting to interact with the supervisor, or supervisor who put students in more of an "observing" role.

> *… some supervisors tend to jump in a lot more than we need…They'll answer questions instead of you answering questions for the patient, or I've also noticed that sometimes the patients will look directly to the supervisor as opposed to looking at you, possibly because they know you are a student and they kind of want to make sure that you are saying the right things, and that can be frustrating because it's supposed to be my session. And sometimes when they're directly looking at the supervisor, the supervisor tends to take over a little bit, and I don't have as much independence or control over the session.* (LA participant)

> *I think sometimes depending on the supervisor you're with if then they take away from your ability to say things. You know, some supervisors*

are not as good at giving students a chance to speak up and a chance to try things. They just want you to watch. So if you're with a supervisor like that it's very hard. (HA participant)

Category 3: Lack of confidence (Total n = 2; LA= 2; HA= 0). Three students indicated they were more likely to second guess their knowledge or abilities to handle situations when the supervisor was present. For example, "Sometimes it just makes you second guess the information you already know" (LA participant).

Domain 2: Session dynamics (Total *n* = 18; LA= 10; HA= 8). Many students commented on how the session was affected by the supervisor's presence. This domain includes four categories.

Category 1: Difficulty establishing rapport (Total n = 10; LA= 5; HA= 5). These interviewees variously noted that patients would sometimes address the supervisor instead of the supervisee, patients would have less faith in the supervisee because she or he needed a supervisor present, or that the small talk at the beginning of sessions was more difficult.

…with [supervisors] hanging off your every word, you really spend a lot more time thinking about your word choice and about the exact thing that you're going to say which can sometimes take away from the relationship you're trying to build with your patient, because you're so in your own head… (LA participant)

I think that it changes the rapport. Some patients might look at the counselor even though you're explaining something to them, whereas if

you're the only person in the room, all their attention would be on you. Sometimes if you're with a supervisor, the patient has less trust in the student, and so I think that all those things…a general theme is that it might take away rapport from the student while there's a counselor in the room. (HA participant)

Category 2: Counsel for supervisor, not patient (Total n = 6; LA= 3; HA= 3). These participants spoke about feeling they had concentrate on doing things to satisfy the supervisor rather than on what they felt was natural to them or what they thought was best for the patient.

I think that when my supervisor is in the room I'm more focused on what words I'm choosing, I'm more focusing on genetic counseling in a textbook way rather than responding to the patients because I know I'm…getting marked on what a genetic counselor would do and what a genetic counselor would say instead of kind of going with my gut feeling, in a, whatever moment that was. (HA participant)

Sometimes I feel like I can't quite be myself because I feel like I have to perform for my supervisor…there are certain ways that I might interact with patients that I might not otherwise with a supervisor in the room just in terms of letting my personality come out a little more, or spend a little more time in one section when I know I need to move onto another one, like from personal history to medical history…I might spend more time

where I feel like it's necessary rather than thinking about "Well, my supervisor probably wants me to move on…" (LA participant)

Category 3: Interruptions/taken over (Total n = 4; LA= 3; HA= 1). A few students commented on supervisors who would interject either too frequently or too early in sessions. For example, "Sometimes supervisors get carried away I guess. So if they do step in to say something, a couple of them that I've worked with haven't kind of stopped and given me the reins back to the session…" (LA participant) and:

...if they thought that I had completed my thoughts and I hadn't completed them, then they start talking, they kind of take over. That's kind of frustrating because a lot of the time I was going to say that, just in a different point in the conversation. (HA participant)

Category 4: Overly dependent on supervisor (Total n = 3; LA= 3; HA= 0). These participants described sometimes using the supervisor too frequently to help them work through difficult situations or explanations.

Say for instance, there's a carrier frequency or a recurrence risk or maybe a chance that it goes along with a syndrome that you're pretty sure you have, but because that supervisor is sitting in the room you might defer to them and ask them anyway, when I think, for me at least, I need to just be more comfortable with the information that I know and just use it, not relying on them for support. (LA participant)

Domain 3: Overly critical/nitpicking (Total *n* = 2; LA= 1; HA= 1). Participants in this domain indicated they felt supervisors placed too much emphasis on small details which distracts supervisees during sessions.

> *…as a student I think it's really easy to feel like…they're trying to nitpick everything that you're saying and doing, and I understand that it's part of the process but at the same time] may feel very judgmental and [students may feel]criticized.* (HA participant)

Summary of Responses Related to Having a Supervisor in Session

Table 8 summarizes the response patterns for each anxiety group. Similarities across groups included commonly perceiving the supervisor's presence in session as a safety net but also feeling stress or anxiety due to being watched. Several participants also highlighted feeling more confident or comfortable because of the supervisor's presence and thought the process led to better feedback and more accurate evaluations. Some participants from each group also commented that having the supervisor in session made establishing rapport with the patient more difficult and caused them to counsel for their supervisor rather than for their patient and saw this as a disadvantage of the system.

No domains or categories met the criteria for strong likelihood of differences, but two domains and four categories met criteria for moderate likelihood of differences between groups. The high anxiety group was more likely to mention ways the supervisor's presence led to improved training in general, and specifically in terms of pointing out blind spots. The high anxiety group was also less likely to mention how the supervisor's presence could be beneficial for patients. When describing the safety net effect, the low anxiety group was more likely to highlight the supervisor's ability to provide information or answers to patient questions, but less likely to comment on the supervisor's ability to help them when they become stuck in session. As for

Table 8

Domain and Category Frequency Labels for Interview Questions 5a and 5b

Domain/*Category*	Total		Low		High	
	n	Type	*n*	Type	*n*	Type
Question 5a: What are the advantages of having your supervisor sit in on sessions with you?						
Safety Net	24	Typical	13	General	11	Typical
*Information**	*18*	*Typical*	*11*	*Typical*	*7*	*Variant*
*Guidance**	*7*	*Variant*	*2*	*Rare*	*5*	*Variant*
Confidence/comfort	*6*	*Variant*	*3*	*Variant*	*3*	*Variant*
Improves Training*	15	Typical	6	Variant	9	Typical
First-hand feedback & evaluations	*11*	*Variant*	*5*	*Variant*	*6*	*Variant*
*Notice student blind spots**	*6*	*Variant*	*1*	*Rare*	*5*	*Variant*
Quality Assurance for Patients*	7	Variant	5	Variant	2	Rare
Question 5b: What have been the disadvantages of having your supervisor sit in on sessions with you?						
Internal Reactions	22	Typical	10	Typical	12	Typical
Stress/anxiety of being watched	*19*	*Typical*	*8*	*Typical*	*11*	*Typical*
Lack of independence	*5*	*Variant*	*3*	*Variant*	*2*	*Rare*
Lack of confidence	*2*	*Rare*	*2*	*Rare*	*0*	--
Session Dynamics	18	Typical	10	Typical	8	Typical
Difficulty establishing rapport	*10*	*Variant*	*5*	*Variant*	*5*	*Typical*
Counsel for supervisor, not patient	*6*	*Variant*	*3*	*Variant*	*3*	*Variant*
Interruptions/taken over	*4*	*Variant*	*3*	*Variant*	*1*	*Rare*
*Overly dependent on supervisor**	*3*	*Variant*	*3*	*Variant*	*0*	--
Overly Critical/ Nitpicking	2	Rare	1	Rare	1	Rare

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

disadvantages, the low anxiety group was more likely to mention feeling overly dependent on their supervisors.

Interview Question 6a: What have been the advantages of having multiple supervisors per rotation?

Responses to this question yielded four domains: exposure to multiple styles, improved training, feedback from different perspectives, and comfort.

Domain 1: Exposure to multiple styles (Total *n* = 24; LA= 12; HA= 12). Participants in this domain focused on how different supervisors showed them varied methods and styles of genetic counseling, often saying this helped them understand there is not a single "right" way to be a genetic counselor. This domain includes two categories.

Category 1: Develop your own style (Total n = 18; LA= 9; HA= 9). A great number of students shared how seeing many different styles of genetic counseling helped shape their own personal style.

> *The exposure to a lot of different counselors' styles, which is always a unique opportunity because we're trying to all develop our own counseling styles, and getting the chance to see so many different supervisors presenting the same information and doing well with their patients but in different ways is really a neat advantage to having more than one supervisor on a rotation.* (LA participant)
>
> ---
>
> *…at this point I'm trying to build my own style, so the more different people I can observe and the more different input that I get just helps me to figure out exactly what kind of counselor I want to be and what I want my style to be…* (LA participant)

Category 2: Counseling techniques (Total n = 15; LA= 9; HA= 6). Many interviewees emphasized the techniques demonstrated by different supervisors to handle the same situation or explanation. For example, "…people have different techniques of counseling and they can help you figure out what techniques work best for you and offer

their opinions. The different realms of experience kind of shed a different light on it for students…" (LA participant) and "The advantages of multiple supervisors is *[sic]* certainly that you can see different ways of doing the same things still accomplishing the same goal…" (LA participant).

Domain 2: Feedback from different perspectives (Total *n* = 9; LA= 5; HA= 4). Students in this domain mentioned multiple supervisors enhance the feedback supervisees' receive. For example, "[Supervisors] have, based on their own counseling style or their personality, a different take on my performance and so that's helpful to have that kind of range of input" (HA participant) and:

> *Well, you are able to get different perspectives. If you have just one supervisor at one clinical site then I think [the supervisor] really [gets] to know you and your counseling style but with different supervisors it's sometimes helpful to have that different perspective of either being reaffirmed in what you've already heard before or hearing new feedback about other points of your counseling that can be improved upon. So I think really just that different perspective is the biggest benefit.* (HA participant)

Domain 3: Improved training (Total *n* = 6; LA= 3; HA= 3). Students in this domain commented on the ways having multiple supervisors created a more well-rounded educational experience for them. This domain included two categories.

Category 1: Strengths and specialties (Total n = 6; LA= 3; HA= 3). These participants noted that each supervisor has unique talents, expertise, and skills which benefit their supervisees. For example, "And different people kind of have different

strengths and so I think you get to learn from each of those different strengths…" (LA participant) and:

> *And I also think that certain people are better at certain skills, and they might be able to identify…the things that you need to work on that another counselor might not notice or focus on, so I think you get a more well-rounded feedback because it's not just one person.* (LA participant)

Category 2: Balance (Total n = 2; LA= 1; HA= 1). Two participants commented that supervisors balanced each other out in terms of what they focused on and how well supervisees got along with them.

> *…one supervisor was really good about giving me constructive criticism whereas the other one didn't give a lot of constructive criticism and I think it balanced really well…after I came out of the session where I got a lot of criticism, I would go and counsel with someone who was really positive so it helps my confidence level stay at a reasonable level.* (HA participant)

Domain 4: Comfort (Total *n* = 3; LA= 1; HA= 2). Three students mentioned having multiple supervisors helped them feel more comfortable.

> *Getting different feedback, different ways of actually counseling and just seeing that all those different ways work and, and it kind of being reassuring that whatever I do is, there is not really a wrong answer per se as long as you cover everything you need to.* (HA participant)

Interview Question 6b: What have been the disadvantages of having multiple supervisors per rotation?

Responses to this question yielded seven domains: supervisor expectations, supervisor pleasing, relationship, logistics, communication among supervisors, anxiety, and none.

Domain 1: Supervisor expectations (Total *n* = 19; LA= 10; HA= 9). Many students commented on the challenges associated with having to manage the expectations of their supervisors, especially when these expectations were not consistent, or even directly contradictory, within or across rotations.

> *Everybody has different expectations and everybody does have slightly different ways of doing things. So let's say one counselor likes to take a family history starting off with questions x, y, z. When you go to the next rotation and try to take a family history, the new counselor might say, "Oh, I like to do it this way," and so then you kind of have to scrap what you've learned and adjust your style just to the different counselors' expectations. So while it can be advantageous to see all these different things, it can also be challenging when you're trying to fit everybody's expectations and get a good review from each supervisor in the end.* (HA participant)

> *I try to tailor what I do to what I have been evaluated on in a previous session with a supervisor, and so I start doing something a little differently because this is the way I've been sort of evaluated and encouraged to do something, and then the new supervisor who is a different one will say, "Why did you do that? I would've done it this way," so sometimes the*

differences are enough that it changes the way that the evaluation goes. I might get something pointed out as something I should do differently when it was, in fact, something I changed for the supervisor that I just had yesterday. (LA participant)

Domain 2: Supervisor pleasing (Total *n* = 17; LA= 8; HA= 9). Interviewees in this domain noted feeling pressure to please their supervisors and having to do things just because their supervisor wanted them to do so. This domain includes two categories.

Category 1: Modifying one's approach (Total n = 17; LA= 8; HA= 9). Many students described their perceptions of having to "cater" their counseling to their supervisors' preferences and finding it challenging to keep track of each supervisor's requirements.

The fact that certain supervisors really expect you to do things the way they want them to be done, and even though they'll say to you, "Well, the way you did it isn't wrong, but I would prefer for you to do it this way," hampers my attempts to build my own style because I have to go against my instincts or format things the way they want in order to get a good evaluation and for them to give you a positive review, which is kind of frustrating because I feel like I'm getting to the point where I have my own clinical judgment to some extent and don't always get to use that. (LA participant)

I think just that every supervisor expects different things and prefers different things. It's kind of hard for a student to stay on their toes and

remember, okay, I'm counseling with so and so, this is what they like but now I'm counseling with another counselor and this is what they like. So I think that's probably the biggest challenge of it, keeping in mind who you're working with and how you need to adjust your counseling for their supervising. (LA participant)

Category 2: Impedes growth of own style (Total n = 7; LA= 4; HA= 3). A few participants commented it was more difficult to develop their own style because supervisors required them to do things a certain way.

...you'd have to remember, "Okay, who am I with now? How did they like this done?" and so it becomes not about…finding your own style, but about "What can I do here so that this person isn't going to criticize this little point yet again?" (HA participant)

I think in the beginning it creates a lot of time spent on trying to please each individual supervisor when that time could be spent more on your personal style and learning the content better. So I do think that it's definitely a disadvantage to having more than one because it really does take away from your learning… (LA participant)

Domain 3: Limits accurate evaluation (Total *n* = 5; LA= 2; HA= 3). Participants in this domain highlighted ways in which multiple supervisors had a negative impact in that supervisors may not have worked with them enough to form an accurate basis for evaluation. For example, "If you have just 1 supervisor at 1 clinical site, you

know, from start to finish, then I think they really get to know you and your counseling style…" (HA participant) and:

> *…as I progress through a rotation, if somebody hasn't been with me the whole time, and there's been other people with me the whole time, then they don't really necessarily see how I've progressed and don't really know how to judge me at the point that they're coming in and doing a session with me, because they haven't seen that I've gotten better from previous sessions…* (HA participant)

Domain 4: Logistics (Total *n* = 3; LA= 2; HA= 1). Some participants identified differences in forms, procedures, formatting of letters, and difficulty in coordinating schedules as disadvantages of having multiple supervisors. For example, "…coordinating with them, finding time in their schedule…" (LA participant).

Domain 5: Communication among supervisors (Total *n* = 3; LA= 1; HA= 2). A few students emphasized their desire for strong communication among supervisors and expressed concern if such communication were not present.

> *I think that my supervisors have been good about talking with each other throughout the whole time and saying "[Respondent's name has] been doing better at this, and she should work at this," and continuing on with those discussions. But I think that could easily be a problem if there was not discussion like there was.* (HA participant)

Domain 6: Stress (Total *n* = 1; LA= 1; HA= 0). One student explicitly brought up stress related to having multiple supervisors. For example, "I think just adjusting to a

new place and a new and different way of doing things is also initially stressful" (LA participant).

Domain 7: None (Total *n* = 1; LA= 0; HA= 1). One interviewee could not think of any disadvantages of having multiple supervisors.

Summary of Responses Related to Multiple Supervisors

Table 9 summarizes the response patterns for each anxiety group. The most commonly reported advantage of having multiple supervisors was seeing multiple styles, especially for developing their own style of counseling. Some participants also mentioned opportunities for feedback from a variety of perspectives. In terms of disadvantages of having multiple supervisors, the most commonly mentioned issue was managing multiple sets of expectations, followed closely by supervisor pleasing behaviors. No domains or categories met the criteria for strong likelihood of differences, but one category met criteria for moderate likelihood of differences between groups. The low anxiety group was more likely to specifically comment on the different techniques used by different supervisors.

Summary of Research Question 4: Are there differences among levels of anxiety in the perceptions of the structure or logistics of supervision?

Regardless of group, the most common benefit of having supervisors in session as perceived by participants was the safety net effect. Fewer, however, commented explicitly on feeling increased comfort or confidence because of the supervisor's presence or thinking their presence improved the feedback supervisees received. When discussing having multiple supervisors, the most common benefit was helping to develop one's own style, again regardless of group. A less common similarity was getting

Table 9

Domain and Category Frequency Labels for Interview Questions 6a and 6b

Domain/*Category*	Total		Low		High	
	n	Type	*n*	Type	*n*	Type
Question 6a: What have been the advantages of having multiple supervisors per rotation?						
See Multiple Styles	24	Typical	12	General	12	Typical
Develop your own style	*18*	*Typical*	*9*	*Typical*	*9*	*Typical*
*Counseling techniques**	*15*	*Typical*	*9*	*Typical*	*6*	*Variant*
Feedback from Different Perspectives	9	Variant	5	Variant	4	Variant
Improved Training	6	Variant	3	Variant	3	Variant
Strengths & specialties	*6*	*Variant*	*3*	*Variant*	*3*	*Variant*
Balance	*2*	*Variant*	*1*	*Rare*	*1*	*Rare*
Comfort	3	Rare	1	Rare	2	Rare
Question 6b: What have been the disadvantages of having multiple supervisors per rotation?						
Supervisor Expectations	19	Typical	10	Typical	9	Typical
Supervisor Pleasing	17	Typical	8	Typical	9	Typical
Modifying one's approach	*17*	*Typical*	*8*	*Typical*	*9*	*Typical*
Impedes growth of own style	*7*	*Variant*	*4*	*Variant*	*3*	*Variant*
Limits Accurate Evaluation	5	Variant	2	Rare	3	Variant
Logistics	3	Variant	2	Rare	1	Rare
Communication between Supervisors	3	Variant	1	Rare	2	Rare
Stress	1	Rare	1	Rare	0	--
None	1	Rare	0	--	1	Rare

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

feedback from different perspectives. As for disadvantages, having the supervisor in session was experienced by some as anxiety producing or causing them to counsel for the supervisor rather than the patient, and others expressed frustration with supervisors interrupting sessions. Regarding multiple supervisors, the most common disadvantage was managing various expectations, with supervisor pleasing behaviors were also fairly common.

None of the differences between groups for this research question reached the level of high probability of differences. In terms of advantages, the high anxiety group

seemed to focus more on the way the supervisor's presence improved their own training, while the low anxiety group was more likely to bring up how it helps the patient. While all groups talked about the safety net effect, the type of net varied by group, with low anxiety participants highlighting aspects such as answering a question they did not know the answer to, but they were less likely to comment on supervisors' ability to provide guidance when they got stuck in session. When discussing multiple supervisors, the low anxiety group was most likely to focus on the advantage of seeing different styles and techniques. Regarding disadvantages, the high anxiety group did not bring up feeling overly dependent when in their supervisors' presence.

Research Question 5: Are there differences among levels of anxiety in perceptions of what happens in supervision?

Interview Question 8a: On average, across all supervisors, how much have you talked about your own reactions or impressions of sessions versus talking about clinical or patient-focused issues?

Given the concrete nature of the responses to this question, no domains were extracted. Participants were approximately equally balanced between characterizing the balance as moderately skewed to the patient (focusing on patient issues 60-75% of the time), moderately skewed to their own reactions (focusing on themselves 60-75% of the time), and heavily skewed to the patient (more than 80%). Two participants, however, described interactions with their supervisors as being equally balanced on patient issues and their own reactions and the balance as being highly skewed toward their own reactions (more than 80%). Frequencies are presented in Table 10.

Table 10

Frequencies of Participant Descriptions of the Balance in Their Discussions with Supervisors between Their Personal Reactions to Sessions versus Patient Issues

Balance	Total	Low Anxiety Group	High Anxiety Group
Moderate to Patient	9	4	5
Moderate to Personal	7	4	3
Heavy to Patient	7	3	4
Equal	2	1	1
Heavy to Personal	2	1	1

Note. Moderate = 60-75% of the time; Heavy = > 80% of the time

Interview Question 8b: On average, across all supervisors, what would be the ideal balance between your own reactions or impressions of sessions versus talking about clinical or patient-focused issues?

Responses to this question yielded five domains: 50-50, moderately skewed to patient, moderately skewed to personal, heavily skewed to patient, and depends on experience/specialty.

Domain 1: Moderately Skewed to Patient (Total *n* = 10; LA= 6; HA= 4). These students described their ideal supervision as being focused on patient issues between 60 and 70% of the time. For example, "I think maybe 60/40" (LA participant) and "I would say 70% clinical, 30%...what I felt about it" (LA participant).

Domain 2: 50-50 (Total *n* = 9; LA= 5; HA= 4). Participants in this domain described their ideal supervision as being evenly balanced between personal reactions and patient issues. For example, "I think it would be good to try to get around 50/50" (HA participant) or:

I'd probably say it would be better to be half and half because, particularly in our field you need to learn to take care of yourself and

> *understand why you react certain ways to certain situations so that you can better control that in the future, but that doesn't seem to be necessarily the way it happens. But, I would say half and half because it's important to know how the patient reacts with what you're saying and how to use that with other patients, but also to be able to take care of yourself and know what you need to do better or think about later next time.* (LA participant)

Domain 3: Moderately Skewed to Personal (Total *n* = 5; LA= 1; HA= 4). Interviewees in this domain described their ideal supervision as being focused on their own reactions between 60 and 70% of the time. For example, "I think it should be 65 me and 35 patient" (HA participant) and:

> *Maybe make it a little more patient, maybe like 60/40. I would keep the focus on me just because this is the place where I'm supposed to be learning, and if we don't talk about what I did and my skills and how to work on it, I won't be able to learn how to be a counselor as much. But I think it is also important to talk about how the patient reacted and how the patient felt, and bring that into it. So, a little more focus on the patient, but definitely keeping it on my learning.* (HA participant)

Domain 4: Heavily Skewed to Patient (Total *n* = 3; LA= 0; HA= 3). Participants in this domain described their ideal supervision as being focused on patient issues at least 80% of the time.

> *I think 20% [focused on self] is good because I think that what I'm there to learn is…not as much about my own personal reaction, because I think*

over time that's going to dissolve anyway whether or not we talk about that, but really what I need to learn is that this supervision area of my learning is how I dealt with the patients and how I should do that in the future. (HA participant)

Domain 5: Depends on Experience/Specialty (Total *n* = 3; LA= 2; HA= 1). These participants commented that their ideal balance would vary depending on how much experience they had or what rotation they were doing.

I think that also depends on where you are in the program. Because like I was saying, I think talking about your own reactions and stuff is a little more advanced, and that in the beginning it's really hard to do that because when you're just starting to work with patients, you get so, like, freaked out about working with them, and you're really concentrating on the content, but it's harder to think about yourself. (HA participant)

Interview Question 8c: On average, across all supervisors, how much have you talked with your supervisor about the relationship between the two of you?

Responses to this question yielded seven domains: rarely, never, not necessary, frequently, beginning & end, end only, and beginning only.

Domain 1: Rarely (Total *n* = 11; LA= 2; HA= 9). Students in this domain indicated they had spoken about the supervisory relationship, but only briefly or sporadically. For example, "Barely any…actually being able to talk to our supervisors about the rotations is a little harder in our setup. They're not all as approachable as you'd like" (HA participant) and:

> *Oh, hardly at all I would think. I think we talk about expectations but not so much about expectations for our relationship, more of expectations for deadlines for preparation, deadlines for writing letters, and, what's expected of me in clinic, but not so much about how we're going to interact together. I think that's a very rare conversation.* (LA participant)

Domain 2: Never (Total *n* = 6; LA= 5; HA= 1). Interviewees in this domain said they did not talk about the supervisory relationship at all. For example, "I'm not sure I've ever really talked to them directly about my relationship with them as the student" (HA participant) and "I don't think we really talked about it at all actually" (LA participant).

Domain 3: Frequently (Total *n* = 6; LA= 2; HA= 4). These students said they regularly spoke to their supervisors about the supervisory relationship. For example, "With my first supervisor we were very open in talking about it and very open to talking about, you know, the relationship of the supervisor with the student and how that impacted both of us" (HA participant) and:

> *I think for my program specifically, it is actually a pretty big focus. We have start of rotation evaluations and mid rotation evaluations and final rotation evaluations and case participation forms, and all of these forms talk about self-reflection and feedback, and it's the supervisor evaluating the relationship between her and the student. It's the student also evaluating the relationship that she has with the supervisor…* (LA participant)

Domain 4: Not Necessary (Total *n* = 5; LA= 2; HA= 3). These students indicated they did not see the point of discussing the supervisory relationship, typically because their relationships with supervisors had gone well so far. For example, "I haven't had any difficulties necessarily where I felt the need to talk to my supervisor in the middle of the rotation about giving me different feedback or giving me more feedback or anything…" (LA participant) and:

> *It just, our relationship seemed so natural, it's not like there were any issues where we had to sit down and say "Something isn't quite working here, we need to figure out our roles." There was nothing like that, and I don't think there was ever really a need to talk about the positives as we went along.* (LA participant)

Domain 5: Beginning and End (Total *n* = 4; LA= 3; HA= 1). These interviewees discussed the supervisory relationship at both the beginning and end of their rotations.

> *Well, in my program before we start a new rotation we have to sign a supervisor agreement. I mean, a supervisor is the one who writes that usually, and it usually discusses like their expectations of us and what we need to do and like what they're going to do. And so it's talked about before we start our rotations, and then we also discuss…evaluations of each other at the end of the rotation.* (HA participant)

Domain 6: End Only (Total *n* = 3; LA= 1; HA= 2). Participants in this domain described discussing the supervisory relationship only at the end of the rotation.

> *So, I'd say with a new supervisor that would be very common, but I don't think with any other supervisors I've really had a conversation about the supervisory relationship other than we do complete evaluations of our rotation at the end of every rotation, and one of the questions is to comment on the supervision. So I would just say, you know, "I liked that you gave me this type of feedback, I liked that you allowed me to do this, I did not like this aspect of the supervision." It was more of a form that you filled out but you didn't necessarily talk to the person…* (LA participant)

Domain 7: Beginning Only (Total *n* = 2; LA= 2; HA= 0). Students in this domain described discussing the supervisory relationship only in the beginning of the rotation. For example, "Well, usually the first day we kind of go over that and what is expected…" (LA participant).

Summary of Responses Related to Focus of Supervision Discussions

Table 11 summarizes the response patterns for each anxiety group. Similarities included commonly considering the ideal focus between patient and self in supervision as slightly skewed toward the patient or evenly balanced. Only a few participants said the ideal balance would depend on the specialty and their own expertise. In terms of discussing the supervisory relationship, there was a wide spread of responses. Several participants from each group also mentioned thinking it was not necessary to talk with their supervisors about the supervisory relationship.

One domain met the criteria for strong likelihood of differences. The low anxiety group was much less likely to say they had rarely discussed the supervisory relationship with their supervisor. Three domains met criteria for moderate likelihood of differences

Table 11.

Domain and Category Frequency Labels for Interview Questions 8b and 8c

Domain	Total		Low		High	
	n	**Type**	***n***	**Type**	***n***	**Type**
Question 8b: On average, across all supervisors, what would be the ideal balance between your own reactions or impressions of sessions versus talking about clinical or patient-focused issues?						
Moderately Skewed to Patient	10	Variant	6	Variant	4	Variant
50-50	9	Variant	5	Variant	4	Variant
Moderately Skewed to Personal*	5	Variant	1	Rare	4	Variant
Heavily Skewed to Patient*	3	Variant	0	--	3	Variant
Depends on Expertise/Specialty	3	Variant	2	Rare	1	Rare
Question 8c: On average, across all supervisors, how much have you talked with your supervisor about the relationship between the two of you?						
Rarely**	11	Variant	2	Rare	9	Typical
Never*	6	Variant	5	Variant	1	Rare
Frequently	6	Variant	2	Rare	4	Variant
Not Necessary	5	Variant	2	Rare	3	Variant
Beginning & End	4	Variant	3	Variant	1	Rare
End Only	4	Variant	1	Rare	3	Variant
Beginning Only	2	Rare	2	Rare	0	--

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups; **high likelihood of differences between anxiety groups.

between groups, including the low anxiety group being more likely to say they had never discussed the supervisory relationship. Regarding the ideal balance between focusing on patient or the self, the low anxiety group was less likely to prefer a small skew toward the self or a large skew toward the patient.

Interview Question 9a: On average, across all supervisors, how much of the content of supervision has been decided by you versus how much has been decided by your supervisor?

Given the concrete nature of the responses to this question, no domains were extracted. The most common response was the responsibility for content was equally

balanced between the supervisor and supervisee. The next most common was for the balance to be heavily skewed to the supervisor (more than 80% of the time), followed by moderately skewed to the supervisee (60-75% of the time), and moderately skewed to the supervisor (60-75% of the time). Two participants characterized the balance as heavily skewed to the supervisee (more than 80%). The low anxiety group seemed less likely to report an even balance between the supervisor and the supervisee in determining content, while the high anxiety group seemed more likely than the low anxiety group to report having a little more control of the content than their supervisors. Frequencies are presented in Table 12.

Table 12

Frequencies of Participant Descriptions of the Balance of Who Determines the Content Discussed in Supervision

Balance	Total	Low Anxiety Group	High Anxiety Group
Equal	9	3	6
Heavy to Supervisor	6	4	2
Moderate to Supervisee	5	1	4
Moderate to Supervisor	5	2	3
Heavy to Supervisee	2	2	0

Note. Moderate = 60-75% of the time; Heavy = > 80% of the time

Interview Question 9b: On average, across all supervisors, what would be the ideal balance of how much of the content of supervision is decided by you versus decided by your supervisor?

Responses to this question yielded three domains: 50-50, moderately skewed to supervisor, and moderately skewed to supervisee.

Domain 1: 50-50 (Total *n* = 15; LA= 6; HA= 9). Many students described their ideal supervision as being evenly balanced between content determined by themselves

and their supervisors. For example, "I'd probably be fine with setting it more to a 50-50 spot because sometimes a supervisor might have something that's really necessary or really important to talk, and so it'd be good for the supervisor to bring it up" (LA participant) and:

> *I think I'd put it closer to 50/50. The place I'm at now I think it's closer to that, whereas this summer anytime I wanted to talk about stuff regarding clinic I had to bring it up, and so I was never really sure if I was doing enough, if I was doing too much, like, if I was asking the right questions, so that was a little nerve-wracking for me.* (HA participant)

Domain 2: Moderately Skewed to Supervisor (Total *n* = 10; LA= 4; HA= 6). Participants in this domain described their ideal supervision as having between 60 and 80% of the content determined by the supervisor. For example, "I would think more like 80% supervisor, 20% student" (LA participant) and "I think from a student's point it's always difficult to think about, you know, you don't necessarily always even know what you want to talk about with the supervisors or with the sessions or with kind of the feedback" (HA participant).

Domain 3: Moderately Skewed to Supervisee (Total *n* = 2; LA= 2; HA= 0). Interviewees in this domain described their ideal supervision as having between 60 and 70% of the content determined by themselves. For example, "…maybe more ideal might be closer to like 60 or 70% student and the rest supervisor" (LA participant).

Summary of Responses Related to Determining Content in Supervision

Table 13 summarizes the response patterns for each anxiety group. No domains or categories met the criteria for strong likelihood of differences, but one domain met

Table 13

Domain and Category Frequency Labels for Interview Question 9b

Domain	Total		Low		High	
	n	**Type**	***n***	**Type**	***n***	**Type**
Question 9b: On average, across all supervisors, what would be the ideal balance of how much of the content of supervision is decided by you versus decided by your supervisor?						
50-50*	15	Typical	6	Variant	9	Typical
Moderately Skewed to Supervisor	10	Variant	4	Variant	6	Variant
Moderately Skewed to Supervisee	2	Variant	2	Rare	0	--

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

criteria for moderate likelihood of differences between groups. The low anxiety group was less likely to prefer an even balance between supervisor and supervisee control of content.

Interview Question 10a: What has been the most uncomfortable clinical issue for you to discuss in supervision?

Responses to this question yielded three domains: actual, none, and hypothetical.

Domain 1: Actual (Total *n* = 16; LA= 7; HA= 9). Just over half of the students described uncomfortable conversations related to clinical topics with their supervisor, typically relating to some aspect of their own performance. This domain includes five categories.

Category 1: Corrective criticism (Total n = 6; LA= 3; HA= 3). A number of students discussed post-session feedback from their supervisors about areas which the students needed to improve.

I guess it's probably a little uncomfortable if you feel like you made a mistake or said something incorrectly in session and so you always want

the constructive criticism, it's never fun to hear if you doing something wrong or something is not as good as you would expect. (LA participant)

Probably the most uncomfortable topic I've discussed while being supervised was a case that wasn't my best counseling. And it was mostly uncomfortable because I felt like I knew that session didn't go as well as it could have…sometimes you know when you don't do something well and then you have to hear it from someone else as well. It just adds to it. (LA participant)

Category 2: Formal evaluations (Total n = 3; LA= 1; HA= 2). These interviewees highlighted formal evaluations at the mid-point and/or end of the rotation as being uncomfortable. What sets this category apart from the previous category is the focus on summative feedback rather than formative. The former is focused on evaluating the entire performance and is typically considered to be a high-stakes assessment, while the latter is focused on identifying strengths along with targeting growth areas for growth and typically has lower stakes (Bernard & Goodyear, 2009).

Actually the, the hardest part was my final evaluation. They brought up that they didn't think that I took critique well in the beginning but that I got better, and that kind of didn't sit well with me because I didn't feel like I did react negatively even in the beginning, and so I got kind of upset about it. So I think that was probably the most uncomfortable. (HA participant)

Category 3: Emotionally charged situations (Total n = 3; LA= 1; HA= 2). Three students discussed situations when they had to talk to patients who were displaying strong emotions or when they displayed their own emotions in front of their supervisors.

> *...because it was all types of genetic counseling, I ended up doing a number of days at prenatal. I had never had experience in prenatal, and so my first day of prenatal I got kind of upset when they expected me to shadow them and then do a full patient at the end of the day, and even though I felt like I could do it, I didn't feel comfortable doing it, and I got upset right before the patient. I ended up doing the full session but I started crying before the session, so maybe that was the most uncomfortable. I ended up discussing with my supervisor about, you know, how I'm feeling, and then I kind of put myself back together again and it ended up being good.* (HA participant)

Category 4: Disagreeing with supervisors (Total n = 3; LA= 1; HA= 2). Three participants described situations where their opinions or perceptions were different than their supervisors'.

> *...if I disagreed with what he was doing, or if I didn't think the way he was doing something was the best way to do it, I felt like we had a good enough relationship that I could talk to him about it, and I could tell him what my thinking was, but I mean it was uncomfortable because he has been in the field for a very long time, and honestly he likes the way he does things, so I mean, it was uncomfortable to talk about it, but I was able to.* (HA participant)

Category 5: Miscellaneous (Total n = 2; LA= 1; HA= 1). Two participants identified situations that could not otherwise be classified. These included logistical issues and concerns about the clinic's resources.

> *...here have been a couple instances when there were differences in the setting where I went from a peds rotation that was in a big system with lots of resources and lots of people who got together and discussed the cases and had lots of expertise and a real team effort, to a rotation where they rarely saw peds cases but would take them on and it made me uncomfortable patients were being seen in a setting I thought gave them kind of more limited access to really good supervisors, but I'm certainly not going to bring that up...* (HA participant)

Domain 2: None (Total *n* = 9; LA= 6; HA= 3). A number of participants said they had not had an uncomfortable conversation related to clinical topics with their supervisor and could not imagine anything that would be uncomfortable. For example, "I've never felt uncomfortable" (LA participant) and "I haven't really had a topic that's been very uncomfortable. You know, there have been things that have been difficult just because the case has been difficult, but I wouldn't say uncomfortable necessarily" (LA participant).

Domain 3: Hypothetical (Total *n* = 5; LA= 2; HA= 3). A few interviewees said they had not had an uncomfortable conversation related to clinical topics with their supervisor but could imagine a scenario which would make them uncomfortable. This domain includes three categories.

Category 1: Delicate/emotional conversation (Total n = 3; LA= 1; HA= 2). These students mentioned situations where they would have to discuss topics such as pregnancy decisions or grief after the loss of children.

> *I think probably the most uncomfortable would be in a prenatal setting. For instance, the patient deciding to terminate a pregnancy versus not terminate a pregnancy, because people have different viewpoints about that, and I don't know necessarily where the supervisor is coming from on those topics. Even though we are supposed to be nondirective, you still sort of think about that. You know, what is their actual opinion, their personal opinion about those hot button issues.* (LA participant)

Category 2: Supervisor comments about patients (Total n = 1; LA= 1; HA= 0). One participant described a hypothetical situation where a supervisor would make negative comments about a patient based on socioeconomic level or engage in gossip about patients.

> *I have heard instances of other colleagues in my same year where they've felt uncomfortable when perhaps there's a lower socioeconomic class of individual that served at that institute that perhaps there's comments made from supervisors about that so for me if I were to have that happen, that would be uncomfortable.* (LA participant)

Category 3: Having to explain yourself (Total n = 1; LA= 0; HA= 1). One student described a hypothetical situation in which their behavior in session had to be explained to a supervisor afterwards, either because they had made a large mistake or had to justify why they approached something differently than the supervisor would have.

I think maybe what will be uncomfortable is that, even though I feel like supervisors know this, it's always hard to bring it up…[situations] when different people do it differently…and it's just kind of justifying why you did it a certain way. It's not comfortable to be like, "Well, just so you know, when I was in clinic last week with so and so, she was okay with this"… (HA participant)

Interview Question 10b: What has been the most uncomfortable personal issue for you to discuss in supervision?

Responses to this question yielded three domains: actual, none, and hypothetical.

Domain 1: Actual (Total *n* = 14; LA= 6; HA= 8). Interviewees in this domain reported an uncomfortable conversation related to personal topics with their supervisor that actually occurred. This domain includes three categories.

Category 1: Boundaries (Total n = 9; LA= 4; HA= 5). These students brought up situations in which they were not sure if they should disclose their stance on a sensitive issue, they were asked by a supervisor to disclose personal issues or history, or they had to navigate multiple relationships.

I think sometimes I hesitated to bring up topics if for example, a patient brought up something that I had a reaction to but I wasn't sure how the supervisor stood on that topic, and so I didn't quite know if I wanted to have full disclosure about my feelings on it just because I didn't know if their personal reaction would get in the way, or if they would be able to supervise in kind of a neutral way. (LA participant)

Probably in the situations where the relationship was kind of being breached so, for example, where the supervisor would come to me and talk about another student or another person that I knew, saying things that they probably shouldn't be saying about that other student or that other person to me. I was pretty close to that supervisor, we were pretty good friends, so those type of situations were a little bit awkward because I can't say anything bad, I can't say "You shouldn't be talking like that," or agreeing with her about the other person. You just have to kind of smile and nod in those situations. (HA participant)

Category 2: Supervisee feelings (Total n = 6; LA= 2; HA= 4). These participants commented on the difficulty talking with their supervisor about their personal emotional reactions such as anxiety, humility, embarrassment, and frustration.

My anxiety. So I'm just a very anxious person to begin with, and it takes me a while to kind of open up with people, which is tough when you're working with a new supervisor. You're thrown into a new situation and new clinic and new subspecialty in genetic counseling, and so it's just a lot of anxiety. It's also not easy to admit to a lot of people about I have this anxiety problem. So I guess more like, the really personal things about myself, talking to people about that isn't easy, especially when they're in a supervision role, because I don't want them to think that because I'm a really anxious person that they need to treat our supervision differently. I don't want them to feel like they can't give me

constructive criticism because it would make me more anxious for next time. It's a hard conversation to have, I think. (HA participant)

Maybe if the supervisor was questioning my knowledge about something, you know, "You studied that, you should know that at this point," something like that, and just feeling a little bit humbled I guess in that situation. Like, "Oh, maybe I should know this," or you feel like you have to apologize for not knowing something. (LA participant)

Category 3: Feedback regarding things which are difficult to change (Total n = 1; LA= 0; HA= 1). One participant described situations in which she or he received feedback from their supervisor about something she or he perceived as difficult to change in any substantive way.

I have things that I like talking about less, you know, maybe physical mannerisms or facial expressions or things that are harder to control and change. I guess like blushing or something as a topic that a patient says something that flusters you a little bit, that's harder to talk about because it's harder to change… (HA participant)

Domain 2: None (Total *n* = 7; LA= 3; HA= 4). Several students said they had not had an uncomfortable conversation related to personal topics with their supervisor and could not imagine anything that would be uncomfortable. For example, "I don't think any personal issues have come up for me" (LA participant) and "I've never felt uncomfortable" (LA participant).

Domain 3: Hypothetical (Total *n* = 7; LA= 4; HA= 3). A few participants said they had not had an uncomfortable conversation related to personal topics with their supervisor but could imagine a scenario which would make them uncomfortable. There are two categories.

Category 1: Boundaries (Total n = 5; LA= 3; HA= 2). These participants described hypothetical situations in which supervisors asked them to discuss something personal. For example, "I would imagine if a supervisor and I discussed how maybe my personal life or experiences may have caused a negative patient-counselor relationship, or just if the supervisor starts to psychoanalyze the student…" (HA participant) and:

> *I think sometimes if you are involved with a case that the patient has some issues going on their life that is a reflection of maybe a personal issue in your own life that is causing some sort of difficulty for you to carry out that case I think it might be necessary but uncomfortable to have to discuss those personal issues with a supervisor.* (HA participant)

Category 2: Interpersonal dynamics (Total n = 3; LA= 2; HA= 1). These participants mentioned hypothetical situations where interpersonal dynamics between the student and a patient or between the student and supervisor were discussed. For example, "I think, well, not for me personally, but I think in general, countertransference can be pretty challenging…and discussing that with your supervisor could be pretty challenging" (LA participant).

Summary of Responses Related to Uncomfortable Discussions

Table 14 summarizes the response patterns for each anxiety group. Most participants discussed actual conversations related to clinical topics, with the most

Table 14

Domain and Category Frequency Labels for Interview Questions 10a and 10b

Domain/*Category*	Total		Low		High	
	n	Type	*n*	Type	*n*	Type
Question 10a: What has been the most uncomfortable clinical issue for you to discuss in supervision?						
Actual	16	Typical	7	Typical	9	Typical
Constructive criticism	*6*	*Variant*	*3*	*Variant*	*3*	*Variant*
Formal evaluations	*3*	*Rare*	*1*	*Rare*	*2*	*Rare*
Emotionally charged situations	*3*	*Rare*	*1*	*Rare*	*2*	*Rare*
Disagreeing with supervisors	*3*	*Rare*	*1*	*Rare*	*2*	*Rare*
Miscellaneous	*2*	*Rare*	*1*	*Rare*	*1*	*Rare*
None	9	Variant	6	Variant	3	Variant
Hypothetical	5	Variant	2	Rare	3	Variant
Delicate/emotional conversation	*3*	*Variant*	*1*	*Rare*	*2*	*Rare*
Supervisor comments about patients	*1*	*Rare*	*1*	*Rare*	*0*	--
Having to explain yourself	*1*	*Rare*	*0*	--	*1*	*Rare*
Question 10b: What has been the most uncomfortable personal issue for you to discuss in supervision?						
Actual	14	Variant	6	Variant	8	Typical
Boundaries	*9*	*Variant*	*4*	*Variant*	*5*	*Variant*
Supervisee feelings	*6*	*Variant*	*2*	*Rare*	*4*	*Variant*
Feedback regarding things which are difficult to change	*1*	*Rare*	*0*	--	*1*	*Rare*
None	7	Variant	3	Variant	4	Variant
Hypothetical	7	Variant	4	Variant	3	Variant
Boundaries	*5*	*Variant*	*3*	*Variant*	*2*	*Rare*
Interpersonal dynamics	*3*	*Variant*	*2*	*Rare*	*1*	*Rare*

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few.

common uncomfortable topic being receiving constructive criticism. Only a handful of participants who could not think of an actual conversation shared a hypothetical situation. The most common hypothetical situation was related to having delicate conversations with patients. Regarding uncomfortable personal conversations, the most common actual situations were related to boundaries or supervisees talking about their feelings. Among hypothetical situations, the most common related to boundaries, and fewer related to the

dynamics of the supervisory relationship. No differences were found between groups on this question.

Summary of Research Question 5: Are there differences among levels of anxiety in perceptions of what happens in supervision?

In terms of balance between patient issues and personal reactions during supervision, the ideal was most commonly seen as slightly skewed to the patient or divided 50/50 across all groups even though only one participant in each group described their typical balance as 50/50. The ideal balance between supervisors and supervisees regarding determination of content was also most commonly an even split, and in this instance the ideal more closely reflected participants' typical experiences. The supervisory relationship was not frequently discussed according to the participants in the present study. A few participants from each group commented that discussing the supervisory relationship with their supervisors was unnecessary. When it came to describing the most uncomfortable conversation with supervisors, most were able to come up with an experience related to both clinical and personal issues. Clinical topics tended to focus on constructive criticism while boundaries were the most common experiences in both the actual and hypothetical personal conversations reported.

The low anxiety group was less likely to say they have rarely discussed the supervisory relationship with their supervisors, which was the only difference to reach the level of strong likelihood of group differences. The low anxiety group was also more likely to say they had never discussed the supervisory relationship. Regarding the ideal balance between personal and clinical in supervision, the most common responses were 50/50 or slightly skewed toward the patient. As for the ideal balance between supervisor

and supervisee responsibility for determining content, both groups most commonly preferred an equal division.

Research Question 6: Are there differences among levels of anxiety in how anxiety is perceived to affect students in rotations in general or supervision in specific?

Interview Question 11: In general, do you consider yourself to be an anxious person?

Responses to this question yielded two domains: yes and no.

Domain 1: Yes (Total *n* = 14; LA= 3; HA= 11). Interviewees in this domain said they do consider themselves to be anxious people. For example, "More than the average person, yes" (LA participant) and "I would say I am a pretty anxious person in the respect that I worry probably more than I need to…" (HA participant).

Domain 2: No (Total *n* = 14; LA= 10; HA= 4). Students in this domain said they do not consider themselves to be anxious people. For example, "No, not in general" (HA participant) and "I don't think that I'm an overly anxious person" (HA participant).

Interview Question 11a: How has your level of anxiety improved your performance as a genetic counselor?

Responses to this question yielded five domains: behavioral effects, motivation to improve, staying calm, patient benefits, and quality of life.

Domain 1: Behavioral effects (Total *n* = 16; LA= 7; HA= 9). Participants in this domain focused on the effects of their level of anxiety on their behavior. Seven of these participants described themselves as anxious people, and nine did not. This domain includes two categories.

Category 1: Increased case preparation (Total n = 10; LA= 3; HA= 7). These participants indicated their anxiety leads them to spend more time preparing for sessions. Six of these participants described themselves as anxious people, and four did not. For example, "I think it always pushes me to do well. You know, I'm too anxious to ever under prep for a patient or to sort of slack off I guess in creating my outlines and preparing myself" (HA participant) and "I think it definitely causes me to work harder to ensure that I'm as prepared as possible for these cases so that I can minimize the likelihood of getting criticized or getting negative feedback" (HA participant).

Category 2: Rolling with the punches (Total n = 5; LA= 4; HA= 1). A few interviewees noted they were better able to remain flexible in sessions and handle difficult situations as they arise. All five participants in this domain described themselves as non-anxious people. For example, "…if I'm in a situation where I make a mistake, not being anxious allows me to kind of just roll with the punches…" (HA participant) and:

> *I think it helps me in being able to go with the flow of the patients during counseling sessions and not get flustered or off track when the patient takes you to a place that you didn't necessarily have in an outline or had discussed with a supervisor.* (LA participant)

Domain 2: Patient benefits (Total *n* = 7; LA= 6; HA= 1). Interviewees in this domain brought up how patients may feel more comfortable and the supervisees are better able to focus on, understand, or attend to the needs of the patient. Three participants described themselves as anxious people and four did not.

> *I just think people can read anxiety on someone very easily and it would be very difficult if I was a patient and the person talking to me was*

obviously anxious or nervous. I would feel uncomfortable that they were new; they didn't really know what they were doing. So I think having like a confident presence in a counseling room is really, really essential for having a patient feel comfortable and trust you as a care provider. (LA participant)

I think that I've seen in instances as I've gone through some of my rotations that [my anxiety is] an added benefit because I can attend to what the client needs to know and things that come up that are unexpected without having it, you know, blow me out of the water. (LA participant)

Domain 3: Motivation to improve (Total n = 5; LA= 2; HA= 3). These participants spoke about using their anxiety as a driving force to continue working on their skills and knowledge. All five of these participants described themselves as anxious people. For example, "I think it has certainly helped in the way that I'm able to really brainstorm about how my counseling can be improved. I think I've spent a lot of time reflecting on my performance and my delivery…" (HA participant) and:

Yeah, I don't think it's a bad thing necessarily. It definitely makes me more self-aware and I think quicker to want to do things the right way just because I'm worried about making mistakes. So it's definitely improved my work ethic. (HA participant)

Domain 4: Staying calm (Total n = 10; LA= 6; HA= 4). Several students mentioned they can enter new situations or challenges while maintaining a sense of

comfort and confidence. Two of these participants described themselves as anxious people, and eight did not.

> *…it allows me to not get very anxious during a session and if something gets very difficult or very complicated or very heated, or depending on the session, I think it allows me to kind of stay calm and still continue with the session and try to keep it all on track.* (HA participant)
>
> ---
>
> *I don't shy away from experiences, and I don't shy away from highly anxiety-provoking experiences because typically they end up being a great experience, and you feel so much more empowered by the fact that you got through it and it wasn't as bad as you thought it would be.* (LA participant)

Domain 5: Quality of life (Total *n* = 3; LA= 2; HA= 1). Three participants commented that their level of anxiety improves their quality of life. All three participants described themselves as non-anxious people. For example, "I don't lose sleep over it, and so it kind of helps me separate work from life…" (HA participant).

Interview Question 11b: How has your level of anxiety gotten in the way of your performance as a genetic counselor?

Responses to this question yielded three domains: too much anxiety, it hasn't, and too little anxiety.

Domain 1: Too much anxiety (Total *n* = 17; LA= 5; HA= 12). Many participants in this domain indicated their anxiety can rise to an unhelpful level in a

number of ways. Thirteen of these participants described themselves as anxious people, and four did not. This domain includes seven categories.

Category 1: Feeling overwhelmed (Total n = 6; LA= 1; HA= 5). Several interviewees described feeling anxiety to the extent that it became too much to handle constructively or led them to shut down in sessions. Four of these participants described themselves as anxious people, and two did not. For example, "I actually think it hurts my performance because when I get anxious I become like a deer in the headlights, and you miss things that are said, and you're so busy panicking that you can't think properly…" (HA participant) and "Sometimes I do get kind of so nervous before I meet with a patient that I can't think clearly…" (LA participant).

Category 2: Self-consciousness (Total n = 6; LA= 1; HA= 5). Several students commented they become distracted by wondering how their supervisors or patients are viewing the session or the students' performance. Six of these participants described themselves as anxious people, and one did not. For example, "I would say it can create another level to the supervision. Instead of being just focused on me in the session and the patients, I'm worried about what the supervisor is thinking so that can be distracting" (LA participant) and:

> *I think in the session being anxious or nervous reduces my comfort level and my ability to really just focus on the patient instead of my own worry about what my supervisor is thinking as I'm going through the case or the session.* (HA participant)

Category 3: Hinders building rapport with patients (Total n = 4; LA= 2; HA= 2). Participants in this category spoke of ways their level of anxiety got in the way of

connecting with the patient. Three of these participants described themselves as anxious people, and one did not. For example, "…getting face to face with that person, if I am visibly anxious that can really damage rapport right from the start…" (HA participant) and:

> *I think in the few situations where I have been really anxious about a case, when it's particularly difficult, I've had more trouble building a relationship with the patient…I think I end up focusing more on what my goals are for the session, and I'm less receptive and open and able to talk to them about what their goals are.* (LA participant)

Category 4: Showing signs of heightened stress (Total n = 3; LA= 1; HA= 2). These students mentioned that their anxiety had led to sleepless nights, an overly negative perception of things, or difficulty keeping things in perspective. Two of these participants described themselves as anxious people, and one did not.

> *I worry too much and sometimes it's difficult to get things in perspective and allow myself to be that student. I think holding myself [to] very high expectations is generally good and productive but a lot of times it can cause unnecessary stress.* (HA participant)

Category 5: Set impossible standards (Total n = 3; LA= 1; HA= 2). These participants focused on how their anxiety promotes a tendency to create very high expectations for themselves and to be too hard on themselves. All three of these participants described themselves as anxious people.

> *I think sometimes it can cause me to overthink things such as maybe I did a session and it went well and I served my patient well, but there were a*

couple of things I didn't really like how I said, or I didn't have the most amazing rapport with the patient. I have a tendency to sort of beat myself up over that because I guess my level of anxiety causes me to be a bit of a perfectionist in some ways. (HA participant)

Category 6: Cannot plan for everything (Total n = 1; LA= 1; HA= 0). One student highlighted the experience of not being able to plan for all possible situations and the difficultly of adapting in session. This participant self-identified as an anxious person.

If you let [your anxiety] take you over and are concerned about everything little thing in the session, things aren't going to all go the way you planned. And being an anxious person, something going against the plan is never easy, and it's definitely something that you have to work on to remind yourself that it really doesn't matter if it's not going according to plan, but you can still go on, and we can still be okay, so I think it can definitely get in your head a little bit. (LA participant)

Domain 2: Too little anxiety (Total *n* = 6; LA= 4; HA= 2). Several interviewees shared that being overly confident may be a detriment in that they may not prepare as extensively as their colleagues, or they may allow sessions to get off topic. All participants described themselves as non-anxious people.

Sometimes I don't prepare as much as I probably should have, and so if I'm seeing somebody tomorrow and there's something that I've explained 2 weeks ago, I would say, "Oh yeah, I know how to do it," and tomorrow comes and I make a mistake in giving that simple explanation because I

didn't practice or I wasn't anxious enough to practice that. And so I sometimes can be so easygoing that I don't put as much, or maybe I don't put [in] as much preparation as I should be. (HA participant)

...if I have a patient that's rambling or taking me down paths that we don't need to discuss and aren't pertinent to the session, I definitely need to steer them away from that and if I'm a [low anxiety] person and I'm not necessarily feeling that we're crunched for time it might hinder things. (LA participant)

Domain 3: Anxiety does not get in the way (Total *n* = 5; LA= 4; HA= 1). Several participants said their anxiety level does not get in the way of their performance. All five participants described themselves as non-anxious people. For example, "[referring to having low anxiety] it would be very difficult for that to be a problem…" (LA participant) and "I don't see how it would, no" (LA participant).

Interview Question 11c: How does your level of anxiety affect you during supervision?

Responses to this question yielded four domains: not useful anxiety, little to no impact, depends on the supervisor, and useful anxiety.

Domain 1: Little to no impact (Total *n* = 13; LA= 8; HA= 5). Many participants remarked they did not feel their anxiety affected them during supervision in any meaningful way. One of these participants self-identified as an anxious person and 12 did not.

I don't know if my anxiety level does affect me during a debriefing session. I don't feel like during a debriefing session I get anxious. To me, a debriefing session is almost like a way of me getting out any anxiety because I can, I can talk about any of my anxieties with my supervisor at that time. (HA participant)

I don't stress out about my relationship with my supervisors and are they going to approve of this, or am I doing the right thing, or what are they going to think. I'm not very externally oriented. I think I'm more internally oriented. Like, I want to be doing the best possible job and how can my supervisor help me get there, but I'm not worried about the evaluation or anxious because they're sitting in the room or anything like that. (LA participant)

Domain 2: Detrimental to supervision (Total *n* = 12; LA= 3; HA= 9). Participants in this domain emphasized ways their anxiety prevented them from functioning the way they would like during interactions with their supervisors. Sixteen of these participants described themselves as anxious people, and four did not. This domain includes three categories.

Category 1: Worry about supervisor perceptions or evaluation (Total n = 9; LA= 3; HA= 6). A number of students highlighted feeling more concerned with how their supervisor views them or will evaluate them than with gaining competence with the counseling or getting the most from their rotations. Eight of these participants described themselves as anxious people, and one did not. For example, "I think that's probably the

most difficult aspect of supervision is the anxiety of knowing somebody is evaluating you constantly" (HA participant) and:

> *I think it makes me be one of those people that loves a supervisor who gives them lots of feedback and communicates well, because it drives me crazy when I don't know what they're thinking, the good or the bad I guess.* (HA participant)

Category 2: Getting tongue-tied/not speaking up (Total n = 3; LA= 0; HA= 3). These participants described feeling hesitant or freezing in supervision sessions, overthinking the words they use in a supervision session, or not clarifying misunderstandings with supervisors. All of these participants described themselves as anxious people.

> *…sometimes it makes me hesitant to ask questions if I'm afraid that they are stupid questions just because I don't like to sound like I am not completely prepared, or I'm not completely sure about what I'm doing. I don't like to come across like that, so I'll avoid asking [the supervisor] questions that would help me…* (HA participant)

Category 3: Other (Total n = 1; LA= 0; HA= 1). This participant mentioned anxiety resulted in losing sleep prior to days when supervision will take place. This participant self-identified as an anxious person.

> *…it's affected my sleep. Whenever I have a day that I'm going to be supervised, I don't sleep well, but when I'm actually there and doing [counseling] sessions, I'm fine, I don't feel as anxious. So, I guess I would say it's not affecting my [genetic counseling] sessions directly but it is*

affecting indirectly in the sense that I am subconsciously, I'm apparently really anxiety-ridden about it. (HA participant)

Domain 3: Depends on the supervisor (Total *n* = 4; LA= 0; HA= 4). A few students noted that their anxiety affected them differently depending on the supervisor, typically indicating more positive relationships with supervisors mitigated some of their anxiety. Three of these participants described themselves as anxious people, and one did not. For example, "It really depends on whether I have a supervisor with whom I feel like I can discuss the anxiety" (HA participant) and:

I guess it's depends on who the supervisor is. If I really like the supervisor and I really want to impress them, I worry more about what I'm doing. If I don't like the supervisor or I don't really, I don't want to say that I don't like them, but I don't really care as much about what they think about me, then I worry less. (HA participant)

Domain 4: Useful Anxiety (Total *n* = 3; LA= 2; HA= 1). A few participants commented on ways their level of anxiety improved their performance, including preparation and ability to be present with the patient. Two participants described themselves as anxious people and the other did not. For example, "It makes me prepare really well, so I think that's a good thing" (HA participant) and "I think it helps me think less personally about what is going on and helps me concentrate on getting the right information across and being empathetic towards the patient and [be] less me-focused and more patient-focused" (LA participant).

Summary of Research Question 6: Are there differences between levels of anxiety in the strategies for managing anxiety or the perceived efficacy of these strategies?

Table 15 summarizes the response patterns for each anxiety group. Similarities across groups included tending to focus mostly on behavioral effects when discussing positive aspects of anxiety, a few participants mentioning their anxiety gets in the way of forming rapport with patients, several participants commenting that their anxiety makes them worry about how the supervisor is perceiving or evaluating them, and very few positing their anxiety during actual supervision was useful.

Eight domains and four categories met criteria for moderate likelihood of differences between groups. Those in the low anxiety group were less likely to describe themselves as anxious people. These findings validate the STAI-based groupings for the most part. Interestingly, however, three of those classified in the low group considered themselves anxious people, and four in the high group did not. When discussing how anxiety benefits them, the low anxiety group was less likely to discuss how their level of anxiety benefitted patients. Regarding the negative effects of their anxiety, the low anxiety group was less likely to conceptualize the problem as being related to too much anxiety, but more likely to say their level of anxiety does not present a problem. Among those who reported too much anxiety as being detrimental, the high anxiety group was more likely to focus on feeling overwhelmed or self-conscious.

In terms of how anxiety affected them during supervision, the low anxiety group was less likely to consider the effect detrimental to supervision. The low anxiety group was also more likely to say their anxiety had little to no impact on supervision. The high

Table 15

Domain and Category Frequency Labels for Interview Questions 11, 11a, 11b, and 11c

Domain	Total		Low		High	
	n	**Type**	***n***	**Type**	***n***	**Type**
Question 11: In general, do you consider yourself to be an anxious person?						
Yes*	14	Typical	3	Variant	11	Typical
No*	14	Variant	10	Typical	4	Variant
Question 11a: How has your level of anxiety improved your performance as a genetic counselor?						
Behavioral Effects	16	Typical	7	Typical	9	Typical
Increased case preparation	*10*	*Variant*	*3*	*Variant*	*7*	*Variant*
*Rolling with the punches**	*5*	*Variant*	*4*	*Variant*	*1*	*Rare*
Staying calm	10	Variant	6	Variant	4	Variant
Patient Benefits*	7	Variant	6	Variant	1	Rare
Motivation to improve	5	Variant	2	Rare	3	Variant
Quality of life	3	Rare	2	Rare	1	Rare
Question 11b: How has your level of anxiety gotten in the way of your performance as a genetic counselor?						
Too Much Anxiety*	17	Typical	5	Variant	12	Typical
*Feeling overwhelmed**	*6*	*Variant*	*1*	*Rare*	*5*	*Variant*
*Self-consciousness**	*6*	*Variant*	*1*	*Rare*	*5*	*Variant*
Heightened stress	*3*	*Variant*	*1*	*Rare*	*2*	*Rare*
Hinders building rapport with patients	*4*	*Variant*	*2*	*Rare*	*2*	*Rare*
Set impossible standards	*3*	*Rare*	*1*	*Rare*	*2*	*Rare*
Can't plan for everything	*1*	*Rare*	*1*	*Rare*	*0*	--
Too Little Anxiety	6	Variant	4	Variant	2	Rare
It Doesn't*	5	Variant	4	Variant	1	Rare
Question 11c: How does your level of anxiety affected you during supervision?						
Little to No Impact*	13	Variant	8	Typical	5	Variant
Detrimental to supervision*	12	Typical	3	Variant	9	Typical
Worry about perceptions of the supervisor or evaluation	*9*	*Variant*	*3*	*Variant*	*6*	*Variant*
*Getting tongue-tied/ not speaking up**	*3*	*Variant*	*0*	--	*3*	*Variant*
Other	*1*	*Rare*	*0*	--	*1*	*Rare*
Depends on the Supervisor*	4	Variant	0	--	4	Variant
Useful Anxiety	3	Variant	2	Rare	1	Rare

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups; ** high likelihood of differences between anxiety groups.

anxiety group was the most likely to say the effect on supervision depended on the specific supervisor involved.

Research Question 7: Are there differences among STAI measured levels of anxiety in the strategies for managing anxiety or the perceived efficacy of these strategies?

Interview Question 12a: What strategies do you typically use to manage anxiety in your day-to-day life?

Responses to this question yielded five domains: behavioral strategies, physical strategies, social support, cognitive strategies, and prayer/faith.

Domain 1: Behavioral strategies (Total *n* = 18; LA= 10; HA= 8). Many interviewees described activities they engage in to reduce anxiety in their daily lives. This domain includes five categories.

Category 1: Organization (Total n = 10; LA= 4; HA= 6). These participants described time management or organizational strategies such as making lists, schedules, or planning how to approach stressful situations. For example, "I make a lot of lists, so I'm always anxious about time management a little bit and how much I have to get done, and so I am a list maker" (HA participant) and:

> *I think I try to take it out in organization. If I get nervous about something I just try to think, "Okay, how will I step through it? What is my plan?" and I always try to organize my thoughts or organize my schedule, or whatever I can to make the process that I'm nervous about seem a little more linear and a little more thought through.* (HA participant)

Category 2: Work/life balance (Total n = 5; LA= 4; HA= 1). Several students discussed the importance of having personal time away from school and work

responsibilities. For example, "I also will use distraction techniques like, you know, trying to take a hot bath or reading or watching something on TV or playing a card game or something" (LA participant) and:

> *I'm very much a person who if I'm feeling way too stressed out about something I'll just kind of take a step back and go do something else. You know, distract myself with TV, go out to grab a meal, or just kind of take a few minutes away from it just to try and reduce the stress.* (LA participant)

Category 3: Other (Total n = 4; LA= 2; HA= 2). Some participants mentioned other strategies to manage anxiety, such as journaling, shopping, or having a beer. For example, "I journal at night…" (LA participant) and "…this is a terrible habit that I have, but I'm really into shopping, so sometimes when I'm anxious I go shopping, which doesn't work well with the grad school budget…" (LA participant).

Category 4: Practice (Total n = 2; LA= 1; HA= 1). Two students spoke about the benefits of practicing what they want to say to feel less anxious when they have to speak with others. For example, "And I also will practice saying things in front of the mirror or explaining things in front of people over and over and over again, and that helps with my anxiety" (HA participant)

Category 5: Music (Total n = 1; LA= 1; HA= 0). One interviewee mentioned the benefits of listening to music to manage anxiety. For example, "I do a lot of listening to, like, calm music…" (LA participant).

Domain 2: Physical strategies (Total *n* = 14; LA= 6; HA= 8). Many participants in this domain described strategies that involved physical activity or taking care of their bodies. This domain included three categories.

Category 1: Exercise (Total n = 17; LA= 3; MA= 6; HA= 8). A number of students emphasized the importance of getting regular exercise to manage their anxiety. For example, "When I'm anxious the best thing in the world for me is just to go work out" (LA participant) and "Well, I'm a big runner, and exercise is super important as far as keeping my anxiety levels in check…" (HA participant).

Category 2: Meditation/yoga (Total n = 3; LA= 0; HA= 3). A few participants identified yoga, meditation, or breathing exercises as methods for managing their anxiety. For example, "I like to do yoga whenever I can and kind of deep breathing/meditation type exercises. I think that that is really helpful" (LA participant).

Category 3: Nutrition (Total n = 2; LA= 0; HA= 2). A couple of students mentioned the role of a quality diet and eating well. For example, "…making sure that I'm eating well…" (HA participant).

Domain 3: Social support (Total *n* = 10; LA= 5; HA= 5). A number of interviewees highlighted the importance of having people available to talk about whatever is bothering them. This domain includes three categories.

Category 1: Friends (Total n = 8; LA= 4; HA= 4). These participants spoke of the importance of having friends to talk with, vent to, or spend time with in order to calm their own anxieties. For example, "I have a really good friend support circle around me. My classmates and I hang out a lot outside of classes. We just sort of empathize and complain together, so that's really helpful, too" (HA participant) and "I feel like if I don't

talk to somebody about my day then I feel just more like anxious and just having a friend to kind of share that experience with helps me deal with it at least." (HA participant).

Category 2: Family (Total n = 4; LA= 3; HA= 1). A few participants described their families as sources of support. For example, "…calling my mother and talking to her about, like, what's bothering me…helps, just getting it out is a way" (LA participant) and "I talk to my family a lot…" (LA participant).

Category 3: Romantic partner (Total n = 1; LA= 0; HA= 1). One interviewee referenced a romantic partner as a source of social support to help deal with anxiety. This participant said "I talk to my husband" (HA participant).

Domain 4: Cognitive strategies (Total *n* = 7; LA= 3; HA= 4). Some students highlighted ways they try to think about things, especially taking a step back or putting things into perspective. For example, "I try to look at the bigger picture of what's going on and not the minutia. If I can see beyond the stress point I tend to feel less anxious…" (LA participant) and:

> *I try and take a step back and really put things in perspective and think of how far I have come and how whatever it is that I'm being anxious over is probably not a huge deal. I think I use a lot of positive reinforcement to get through whatever it is that is causing that anxiety…* (HA participant)

Domain 5: Prayer/faith (Total *n* = 2; LA= 2; HA= 0). Two participants highlighted the role of their spirituality in managing their anxiety, specifically mentioning prayer and involvement in church. For example, "I think being involved in church lowers my anxiety…" (LA participant).

Interview Question 12b: How well do these strategies typically work for you?

Responses to this question yielded three domains: pretty effective, highly effective, and somewhat effective.

Domain 1: Pretty effective (Total *n* = 19; LA= 9; HA= 10). Many participants described their strategies as working well a fair amount of the time, often using words such as "pretty well." For example, "In general pretty well" (HA participant) and:

> *I think in general pretty well. You know, I'm not anxious enough to the point where I'm not able to be productive or that it hurts my quality of work, so I guess if I took that as a measurement then I think my ways of lowering anxiety generally are pretty effective.* (HA participant)

Domain 2: Highly effective (Total *n* = 5; LA= 3; HA= 2). Interviewees in this domain indicated their strategies were very effective for managing their anxiety. For example, "I would say 90% of the time it works really well" (LA participant) and "They work very well. I mean, I'm not anxious very often but if I am and I go work out I come back and I feel 100 times better" (LA participant).

Domain 3: Somewhat effective (Total *n* = 4; LA= 1; HA= 3). A few participants shared mixed impressions of their strategies, saying they worked sometimes but not always, or they did not always implement their strategies. For example, "It really just depends. I don't know. There doesn't seem to be a lot of rhyme or reason to when I can't stop freaking out and when my strategies work really well" (HA participant) and "…sometimes they work and sometimes they don't…" (LA participant).

Summary of Responses Related to Anxiety Management in Daily Life

Table 16 summarizes the response patterns for each anxiety group. Similarities across groups included relying primarily on behavioral strategies, followed by physical

Table 16

Domain and Category Frequency Labels for Interview Questions 12a and 12b

Domain	Total		Low		High	
	n	Type	*n*	Type	*n*	Type
Question 12a: What strategies do you typically use to manage anxiety in your day-to-day life?						
Behavioral Strategies	18	Typical	10	Typical	8	Typical
Organization	*10*	*Variant*	*4*	*Variant*	*6*	*Variant*
*Work/life balance**	*5*	*Variant*	*4*	*Variant*	*1*	*Rare*
Other	*4*	*Variant*	*2*	*Rare*	*2*	*Rare*
Practice	*2*	*Rare*	*1*	*Rare*	*1*	*Rare*
Music	*1*	*Rare*	*1*	*Rare*	*0*	--
Physical Strategies	14	Typical	6	Variant	8	Typical
*Exercise**	*11*	*Variant*	*3*	*Variant*	*8*	*Typical*
Meditation/yoga	*3*	*Variant*	*3*	--	*3*	*Variant*
Nutrition	*2*	*Rare*	*0*	--	*2*	*Rare*
Social Support	10	Variant	5	Variant	5	Variant
Friends	*8*	*Variant*	*4*	*Variant*	*4*	*Variant*
Family	*4*	*Variant*	*3*	*Variant*	*1*	*Rare*
Romantic Partner	*1*	*Variant*	*0*	--	*1*	*Rare*
Cognitive Strategies	7	Variant	3	Variant	4	Variant
Prayer/Faith	2	Rare	2	Rare	0	--
Question 12b: How well do these strategies typically work for you?						
Pretty Effective	19	Typical	9	Typical	10	Typical
Highly Effective	5	Variant	3	Variant	2	Rare
Somewhat Effective	4	Variant	1	Rare	3	Variant

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

strategies, social support, and cognitive strategies. When participants sought social support, they most frequently looked to friends, followed by family members. Regardless of group, the vast majority characterized their strategies as being fairly effective, while the rest were approximately evenly split between highly and somewhat effective. Notably, no participants described their anxiety management strategies as ineffective. Two categories met criteria for moderate likelihood of differences between

groups. The high anxiety group was less likely to describe actively managing their work/life balance and more likely to use exercise.

Interview Question 13a: What strategies do you typically use to manage anxiety related to your clinical work?

Responses to this question yielded eight domains: same as personal, behavioral strategies, physical strategies, cognitive strategies, supervisor support, social support, other, and prayer/faith.

Domain 1: Same as personal (Total *n* = 14; LA= 9; HA= 5). A large number of students indicated their strategies for managing anxiety were the same for their genetic counseling work as in their personal lives. For example, "Exactly [the same ones]" (LA participant).

Domain 2: Behavioral strategies (Total *n* = 13; LA= 5; HA= 8). Participants in this domain described activities they engage in to reduce anxiety. This domain includes three categories. Seventeen participants also used behavioral strategies in their personal lives.

Category 1: Organization (Total n = 11; LA= 5; HA= 6). These interviewees described time management or organizational strategies such as making lists, schedules, gathering additional information, and planning how to approach stressful situations. Ten participants also used organization as a strategy in their personal lives.

> *And another thing that I think my anxiety drives is being very information seeking, so kind of thinking what I'm anxious about and sort of diving in. If I'm just anxious about, "Oh my gosh, I have to see this patient…I tend to be okay once I actually see my patients, but say my anxiety is I don't*

really know this condition that well. I absolutely will dive into the internet or whatever textbooks I have lying around to educate myself better to kind of relieve my anxiety and feel confident in what I'm talking about… (HA participant)

…the only thing I stress about with my clinical work is actually getting all my work done, and so for that and knowing myself, I have to just keep on top of things. I don't let things pile up, and I don't get behind because I hate to be rushed, and I hate to do things at the last minute. (LA participant)

Category 2: Practice (Total n = 4; LA= 1; HA= 3). A few participants spoke about the benefits of practicing what they want to say to feel less anxious when they have to speak with others. One of these participants also used practice as a strategy in his or her personal life.

I can call up a friend and say "This is all the information I know without looking at my notes," or making sure I didn't forget anything else. Being able to kind of practice with other people is helpful, and the girls in our program are always helpful for that. (LA participant)

When it comes to patients and sessions, if I'm really nervous about it I actually do a lot of practicing. So if I'm talking to a patient about something new that I've never had to explain to someone before, I will write out like a line by line outline of what I want to say, and I will

practice it over and over. I mean, probably like 5 times, but I'll like say it to my dog, I'll talk to my computer, and I do a lot of practicing to build up my confidence level and also to internalize it so that when I get in a situation of talking to a patient, even if they ask me something else, like I know the information, so I can kind of skip around my outline. But by practicing, it helps me remember everything and just feel more comfortable with the information… (HA participant)

Category 3: Work/life balance (Total n = 1; LA= 0; HA= 1). One participant discussed the importance of having personal time away from school and work responsibilities. Two participants also used balancing their work and other responsibilities as a strategy in their personal lives.

I push myself to take breaks and give myself rewards for completing things… (HA participant)

Domain 3: Cognitive strategies (Total *n* = 8; LA= 5; HA= 3). Participants in this domain focused on the perspectives they take, efforts to normalize their experience, or reflecting on things. Seven participants also used cognitive strategies in their personal lives.

I think it's been my general philosophy of sorts towards clinical supervision is all the clinical supervisors are just trying to help. No one is purposely trying to harm me in any way, and really putting in perspective of "This is one supervisor, this is one encounter in an entire rotation, and that's part of my 2 years of training," so it really is not that big of a deal… (HA participant)

Just kind of push it aside because I, and I tell myself that worse comes to worse my supervisor could step in and fix things if it goes wrong but I probably know how to do it, I know I'm capable of. (LA participant)

Domain 4: Physical strategies (Total *n* = 7; LA= 3; HA= 4). Students in this domain described strategies that involved physical activity or taking care of their bodies. This domain includes two categories. All 7 participants also used physical strategies in their personal lives.

Category 1: Exercise (Total n = 5; LA= 1; HA= 4). Several students emphasized the importance of getting regular exercise to manage anxiety. For example, "I also find that if I've had a really like tough day in clinic that going for a run… alleviates that anxiety" (HA participant) and "I try to get my mind off it by exercising…" (LA participant). All five participants also used exercise as a strategy in their personal lives.

Category 2: Meditation/yoga (Total n = 4; LA= 2; HA= 2). These interviewees listed yoga, meditation, or breathing exercises as methods for managing anxiety. For example, "I would say definitely focusing on the breathing is helpful" (LA participant) and "I try to meditate when I can…" (HA participant). Four participants also used some sort of meditation or yoga as a strategy in their personal lives.

Domain 5: Supervisor support (Total *n* = 6; LA= 2; HA= 4). Interviewees in this domain highlighted the support they received from their supervisors. None of these participants mentioned their supervisors when discussing their personal life strategies.

…if I have a supervisor with whom I have the kind of relationship where I can talk about anxiety I'm having about some specific aspect of a case or

some performance, some obstacle I'm trying to get over or some next role I'm taking on, to be able to discuss that and discuss my concerns about it can certainly be very helpful. (HA participant)

I think in clinic the best tool that I have to kind of manage my anxiety is being able to talk to the supervisor. So having a supervisor that has good communication is really beneficial there because if there's something that I'm anxious about or upset about or I have fears about, it's really important to be able to just talk to the supervisor about that. (HA participant)

Domain 6: Social support (Total *n* = 5; LA= 3; HA= 2). Students in this domain mentioned social support, especially from their classmates. Seven participants also used social support as a strategy in their personal lives. For example, "I can bounce things off my classmates beforehand, and they'll kind of remind me 'You're going to do well,' and so I think just having a lot of peer support is helpful" (LA participant) and:

I would say what's good about the fact that these genetic counseling classes are typically very small…We all see each other pretty often, we're all experiencing the same rotations, just at different time intervals, and we kind of can talk together about like, "Oh, this is going on, or that was annoying," and just give each other feedback and kind of vent to each other about what's going on or what's bothering us, and I think that's helpful talking amongst ourselves. (HA participant)

Domain 7: Other (Total *n* = 3; LA= 1; HA= 2). Three participants described additional measures, such as nutrition or medication. Two of these participants used the same strategies for their personal lives. The one who did not said "…at the clinic I just take Xanax" (HA participant).

Domain 8: Prayer/faith (Total *n* = 1; LA= 1; HA= 0). One participant commented on the use of prayer or spirituality to help cope with anxiety during their genetic counseling work. This participant also used faith as a strategy in her or his personal lives. This participant said "I think being involved in church lowers my anxiety" (LA participant)

Interview Question 13b: How well do these strategies typically work for you in this context?

Responses to this question yielded three domains: equally effective as in personal life, less effective than in personal life, and more effective than in personal life.

Domain 1: Equally effective as in personal life (Total *n* = 16; LA= 10; HA= 6). Many participants said their strategies to manage anxiety were approximately equally effective in both their personal lives and their counseling work. For example, "I would say it's the same, about 90% for both clinical and life…" (LA participant).

Domain 2: Less effective than in personal life (Total *n* = 6; LA= 2; HA= 4). Several interviewees reported their strategies to manage anxiety were less effective in their counseling work than in their personal lives. For example:

> *I think it works better in my personal life versus clinical life because in clinical life there's that variable of the patient so even if you've planned three things to say, if the patient interrupts with a question or something*

> *different between step two and three step three won't matter or could be completely different.* (HA participant)

Domain 3: More effective than in personal life (Total *n* = 6; LA= 1; HA= 5). Participants in this domain stated their strategies to manage anxiety were more effective in their counseling work than in their personal lives. For example, "Yeah, definitely been helpful, and it helps me feel like whenever I go into a session I feel really confident because I know the information…" (HA participant) and:

> *I think they work well in that context as well, maybe even better than in your personal life. You can't always plan for everything the same, and you can't plan for everything in a genetic counseling session either, but if I'm feeling anxious because I feel like I'm not prepared enough or don't know enough about a condition, I can read more and more and more, and that really helps make me feel less anxious.* (LA participant)

Summary of Responses Related to Management of Anxiety Related to Clinical Work

Table 17 summarizes the response patterns for each anxiety group. Both groups commonly reported using behavioral strategies, specifically organizational strategies. Cognitive strategies were slightly more common than physical strategies, which is the reverse of general life strategies. The most prevalent description of the effectiveness of their strategies in this context for both groups was the same level of effectiveness as personal life strategies.

Four domains and one category met criteria for moderate likelihood of differences between groups. The high anxiety group was less likely to use the same strategies as

Table 17

Domain and Category Frequency Labels for Interview Questions 13a and 13b

Domain	Total		Low		High	
	n	**Type**	***n***	**Type**	***n***	**Type**
Question 13a: What strategies do you typically use to manage anxiety related to your clinical work?						
Same as Personal*	14	Typical	9	Typical	5	Variant
Behavioral Strategies*	13	Variant	5	Variant	8	Typical
Organization	*11*	*Variant*	*5*	*Variant*	*6*	*Variant*
Practice	*4*	*Variant*	*1*	*Rare*	*3*	*Variant*
Work/life balance	*1*	*Rare*	*0*	--	*1*	*Rare*
Cognitive Strategies	8	Variant	5	Variant	3	Variant
Physical Strategies	7	Variant	3	Variant	4	Variant
*Exercise**	*5*	*Variant*	*1*	*Rare*	*4*	*Variant*
Meditation/yoga	*4*	*Variant*	*2*	*Rare*	*2*	*Rare*
Supervisor Support	6	Variant	2	Rare	4	Variant
Social Support	5	Variant	3	Variant	2	Rare
Other	1	Rare	1	Rare	0	--
Prayer/Faith	1	Rare	1	Rare	0	--
Question 13b: How well do these strategies typically work for you in this context?						
Equally Effective as Personal*	16	Typical	10	Typical	6	Variant
Less Effective than Personal	6	Variant	2	Rare	4	Variant
More Effective than Personal*	6	Variant	1	Rare	5	Variant

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

their personal lives and more likely than the low anxiety group to utilize behavioral strategies and exercise. The low anxiety group was more likely to characterize their clinical strategies as equally effective as their personal strategies, and less likely to describe them as more effective.

Summary of Research Question 7: Are there differences among levels of anxiety in the strategies for managing anxiety or the perceived efficacy of these strategies?

Regardless of the setting of the anxiety being asked about, behavioral strategies comprised the most commonly reported management method. When discussing their daily lives, the vast majority of participants rated their strategies as typically effective,

with the remainder being split fairly evenly between highly and somewhat effective. With anxiety related to clinical work, however, a few participants from each group said their strategies were less effective but a number of the high anxiety participants considered their strategies more effective.

While the broad classifications of anxiety management strategies were similar across groups, the manifestations of these strategies differed. The low anxiety group was less likely to use exercise regardless of the setting. Interestingly, the high anxiety group was less likely to utilize the same strategies across settings, but was more likely to find their clinical-related anxiety strategies effective.

Chapter 5: Discussion

This study sought to investigate the role of trait anxiety in the experience of supervision among 2nd year genetic counseling students. This chapter contains discussions of the major findings of both the initial survey and interviews while situating the results in the context of the genetic counseling supervision literature, compares the present results to recently published supervision competencies (Eubanks Higgins et al., 2013), and presents study limitations, training implications, and research recommendations.

Survey Results

The principal finding of interest relative to the survey was the low level of trait anxiety relative to previous research (Jungbluth, MacFarlane, McCarthy Veach, & LeRoy, 2011). The average trait anxiety score in the present study was 37.5 (*SD* = 8.98) compared to 44.5 (*SD* = 4.1) in the study by Jungbluth and colleagues, which is nearly a full standard deviation difference according to instrument norms [*SD* = 9.22 or 10.15, for working adult women and female college students, respectively (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983)].

Several factors might explain the difference in findings. The difference might be the result of cohort effects, such that those students in training during the Jungbluth and colleagues (2011) study were simply more anxious than those in training at the time of the present study. Another possibility is the current sample includes only 2nd year students, though Jungbluth et al. found no significant differences between 1st and 2nd year students in terms of trait anxiety; so this appears unlikely. The timing of the study may be another important factor. The present survey was conducted in the summer months,

when students are presumably less stressed than during the academic year, while Jungbluth et al.'s survey was conducted in December and January, a time at which students likely had more numerous stressors (e.g., final exams, holiday travel or gatherings). While trait anxiety is a relatively stable construct (test-retest reliability for 104 days = .77; Spielberger et al., 1983), taking the instrument during times of high distress might lead participants to over-estimate how anxious they typically feel, just as taking it at times of low distress could lead to under-estimation.

Finally, the difference could be a matter of sampling error. Each study may have pulled different parts of the genetic counseling student population. The present study included an interview component, which was clearly explained as optional in the study invitation, but may have been anxiety provoking to those with higher levels of trait anxiety (e.g., due to the subject matter, the time commitment, or other unknown variables). Also related to sampling, the usable response rate of the current study was 40%, while Jungbluth and colleagues had a usable response rate of 68%, and the latter study also had approximately 3 times the number of participants as the present one.

Determining the reason(s) for differences in trait anxiety scores is beyond the scope of the present study. Nonetheless, the disparity highlights the need for continued research to understand the role of anxiety among not only genetic counseling students but also practicing genetic counselors.

Interview Broad Themes

Participant agreement. The domains and categories extracted from the interviews resulted in few "general" classifications according to CQR criteria (i.e., all or all but one or two participants supplying a response; Hill, 2012; Hill et al., 2005). No

domains or categories reached the level of general when considering the interview sample as a whole. These findings suggest heterogeneous subgroups within the sample (Hill, 2012), which supports the decision to split the sample into anxiety-based groups.

Only two domains were classified as general across both anxiety groups: Supervision Support and Guidance (Interview Question 3 – most positive aspects of supervision) and Supervisor Behaviors (Interview Question 4 – describe a good supervisor). When describing the advantages of live supervision, the low anxiety group reached general classification for the Safety Net domain. The low anxiety group also reached general classification for the See Multiple Styles domain when discussing the advantages of multiple supervisors. The lack of general domains and categories within the anxiety-based groups could signal the decision to use three groups was not ideal. It may be that other factors are more relevant in distinguishing between students' experiences, or the triggers of anxiety may simply be highly individualistic.

In general, participant responses tended to be more similar when asked about positive aspects or benefits than challenges or disadvantages, which is consistent with previous supervision research (e.g., Hendrickson, McCarthy Veach, & LeRoy, 2002). While the number of domains and categories varied across questions, the positive or beneficial components almost always had fewer total classification labels. For example, Interview Question 1a asked about positive aspects of clinical rotations and had a total of seven classification labels (five domains and two categories). Interview Question 1b asked about challenging aspects of rotations and had a total of 12 classification labels (three domains and nine categories). Participants tended to mention more general situations when talking about positive situations but more specifics when discussing

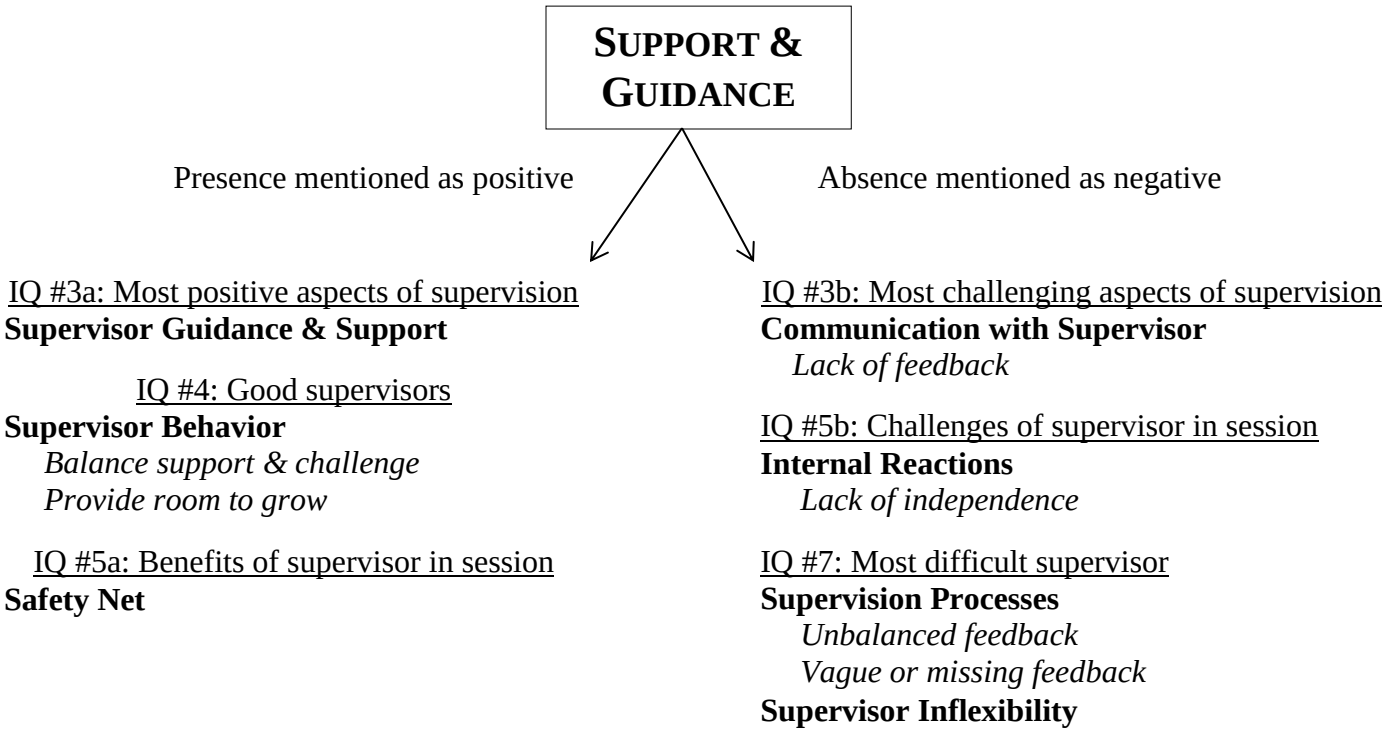
difficult aspects, which could explain the increased diversity of responses. This trend also suggests more agreement among the positive impressions of participants' experiences, with more individual differences related to aspects of their challenging experiences.

Few comparisons reached criteria for strong likelihood of differences. Of all the comparisons between the high and low anxiety groups, only one met criteria for strong likelihood of differences based on CQR recommendations (i.e., the classification labels differ by two or more levels, such as general and variant; Hill, 2012; Hill et al., 2005). The low anxiety group was less likely to say they rarely discuss the supervisory relationship with their supervisors.

The remaining differences met the moderate likelihood of differences criteria adapted from the original CQR recommendations (Hill, Thompson, & Nutt-Williams, 1997). The published criterion was for groups to differ by at least one frequency label (e.g., typical and variant) and the adaptation added the additional criterion of having the number of participants differ by more than two. This prevented a difference of just one or two people from signifying a difference. Thus, the present results point to few differences which meet the more conservative criteria. The dearth of differences rising to this level may have been impacted by the presence of the moderate anxiety group. If the entire sample had been split into two groups instead of three, more differences may have been apparent, but one wonders how accurately a dichotomous split represents the true nature of anxiety. Further research should be conducted to confirm or refute the generalizability of the present findings to the population of genetic counseling students engaged in clinical rotations, preferably using quantitative methodology.

Support and guidance. Throughout the interviews, the importance of supervisors' ability to balance support and guidance arose repeatedly. Students also highlighted the importance of this balance by discussing times when these constructs were not in harmony. The interview questions, domains, and categories related to the theme of support and guidance are represented in Figure 1. Support and guidance are the same two constructs Hart and Nance (2003) identified as the fundamental dimensions of supervision styles in psychology (though they used the term "direction" rather than "guidance"). In their work, which builds upon the Adaptive Counseling and Therapy

Figure 1. Interview questions, domains, and categories related to supervisor support and guidance.

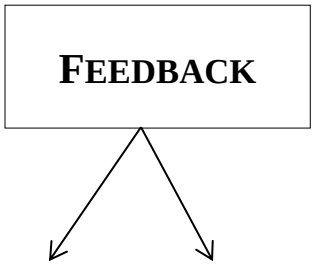


Note. IQ = Interview Question; Domain names are given in **bold**; Category names are given in *italics*.

model (Howard, Nance, & Myers, 1986), they define support as demonstrating empathy and building the relationship between the supervisor and supervisee. They describe direction as questioning, instructing, or challenging the supervisee, with a focus on clinical interventions and conceptualization of patient issues. They describe support as supervisor focus on supervisees' self-image and incorporating supervisees' feelings into the conversation about working with patients. These principles seem to apply to the practice of genetic counseling supervision as well, and thus may be fruitful topics for future research.

Importance of feedback. The prominent influence of the feedback supervisors provide on students' experiences was demonstrated throughout the interviews. The interview questions, domains, and categories related to the theme of feedback are represented in Figure 2. The importance of feedback likely derives from its status as one of the few measures of progress available to students. As they are approaching the practice of genetic counseling as novices, students' ability to accurately self-evaluate will likely be fairly low, which leaves them dependent upon their supervisors to instill a realistic sense of self-efficacy regarding their abilities. Cultivating students' abilities to accurately self-assess both their strengths and growth areas by modeling balanced feedback is valuable for promoting self-reflective practice. Sensitivity to feedback may also stem from students' insecurities, concerns over final evaluations or grades, and/or perfectionistic tendencies. Research in psychology has found feedback can affect trainees' state anxiety (Daniels & Larson, 2001). This suggests those with high trait anxiety may be at higher risk for negative consequences related to unbalanced feedback, as those with higher trait anxiety tend to experience state anxiety more frequently and

Figure 2. Interview questions, domains, and categories related to supervisor feedback.



Mentioned as positive

Mentioned as negative

IQ #1a: Most positive aspects of rotations
Supervision
Feedback

IQ #3a: Most positive aspects of supervision
Supervisor Guidance & Support
Advice/feedback

IQ #4: Good supervisors
Supervisor Behavior
Provide balanced feedback
Provide specific feedback

IQ #5a: Benefits of supervisor in session
Improves Training
First-hand feedback & evaluations

IQ #6: Advantages of multiple supervisors
Feedback from Different Perspectives

IQ #1b: Most challenging aspects of rotations
Relational Factors
Challenging Supervisor Interaction

IQ #3b: Most challenging aspects of supervision
Communication with Supervisor
Lack of feedback
Accepting constructive feedback
Working with Multiple Supervisors
Perceived supervisor credibility/feedback validity

IQ #5b: Challenges of supervisor in session
Internal Reactions
Lack of independence

IQ #7: Most difficult supervisor
Supervision Processes
Unbalanced feedback
Vague or missing feedback

IQ #10a: Most uncomfortable clinical issue to discuss
Actual
Constructive criticism

IQ #10b: Most uncomfortable personal issue to discuss
Actual
Feedback regarding things which are difficult to change

Note. IQ = Interview Question; Domain names are given in **bold**; Category names are given in *italics*.

intensely. Further research is needed to assess how feedback specifically influences students and what student needs it satisfies.

Ego-centric responses. Participant responses focused overwhelmingly on themselves. This may not be surprising given most of the questions were focused on their impressions and experiences, but few students referenced other parties, especially patients. For example, only two participants mentioned the impact they had on patients as one of the most positive aspects of their rotations. Also, the idea of live supervision providing quality assurance for patients was the least frequently endorsed domain of advantages by participants.

The relationship with the patient did come up a few times, typically related to challenges with establishing rapport for various reasons. For example, when discussing the disadvantages of live supervision, Difficulty Establishing Rapport was the most common category in the Session Dynamics domain, with participants describing the supervisor's presence as either distracting for the patient or undermining the student's perceived competency. A few participants also commented that their anxiety level diminishes their ability to connect with patients when discussing how their level of anxiety gets in the way of their performance.

Psychotherapy research has identified clinician self-awareness during session as a component of skilled therapy (e.g., Jennings & Skovholt, 1999). Specific to trainees, however, the results are more mixed. Both trainees (e.g., Nutt-Williams & Hill, 1996) and volunteer clients (e.g., Williams, 2003) linked adverse effects to trainee self-awareness, particularly if that awareness included negative self-talk. Fauth and Nutt-Williams (2005), however, found self-awareness to be generally beneficial. The role of

self-awareness was not explicitly explored in the present study, but several participants commented on being distracted by their anxiety. Further research could investigate this phenomenon in genetic counseling, which may be even more germane given the prevalence of live supervision (Lindh, McCarthy Veach, Cikanek, & LeRoy, 2003).

Supervisor as focal point. This tendency to be self-focused may be due to participants' stages of professional development; a great deal of their attention is centered on their own performance as they learn new skills and engage with patients in novel ways. It could also be reflective, however, of another trend observed in the current results, namely that some students appear to be more focused on their supervisors' evaluations than on the patients. Prior research has found that some genetic counseling students counsel "for their supervisors" rather than for the patients (Hendrickson et al., 2002). Given the prevalent live supervision model, the supervisor's presence during genetic counseling sessions may inherently make them a bigger focal point relative to their presence in other types of supervision modalities. For example, it is possible that live supervision comprises a sort of "double supervision." Students likely are thinking about their supervisors' evaluation of their performance during an actual genetic counseling session (and even receiving indirect feedback when supervisors "step in" to correct student behavior). Students then receive supervision again during the debriefing that follows sessions. Some students may find it particularly daunting to contemplate supervisor feedback while interacting with patients and then "re-experience" that feedback during session debriefings. Double supervision may again amplify the importance of the supervisor relative to other supervision modalities.

One of the fundamental aspects of forming relationships with patients is the ability to be present and focused on them. The centrality of the relationship to genetic counseling has been demonstrated in prior research (e.g., Lobb, Butow, Meiser, & Tucker, 2005; McCarthy Veach, Truesell, LeRoy, & Bartels, 1999; Roter, Ellington, Hamby Erby, Larson, & Dudley, 2006; Skirton, 2001), and it is a core component of the Reciprocal-Engagement Model of Genetic Counseling Practice (McCarthy Veach, Bartels, & LeRoy, 2007). Yet in several instances throughout these interviews, it appears the supervisees' attention during genetic counseling sessions was more focused on the supervisor in the room with them than on the patients. For example, when discussing the disadvantages of live supervision, the second most frequent category in the Session Dynamics domain was Counsel for Supervisor, Not Patient, which is again reminiscent of the findings of Hendrickson et al. (2002). Even more frequently endorsed was the category Modifying One's Approach in the Supervisor Pleasing domain in response to the question about disadvantages of having multiple supervisors. Some of these responses likely reflect appropriate modifications made for important reasons, but many of the participants described the modifications as arbitrary or made because of the supervisor's lack of flexibility; some even said the changes went against their own instincts of what would most benefit the patient. A sizeable number of participants also considered their amount of concern about supervisor perceptions or evaluations to be detrimental to their experience of supervision, indicating this issue is non-trivial in these students' perceptions.

Terminology. An interesting trend in the data concerns students consistently using the term "constructive feedback" to refer to feedback which contained areas

needing improvement or correction. The term constructive seems to have replaced the idea of "negative feedback" as the opposite of what is commonly termed "positive feedback," or the reinforcement of a job well done. While there is nothing inherently wrong with the term constructive feedback, it may imply positive feedback is not constructive. The definition of constructive is "promoting improvement or development" (Constructive, 2013). Positive feedback meant to reinforce appropriate behavior seems to fit this definition in that it promotes development of a competent genetic counselor. The term "corrective feedback" may be a more descriptive label for what students were describing. Some may be resistant to the term "corrective," however, because it brings attention to something which needs correction and is therefore "wrong." Perhaps another term would be more appropriate, but the possible implication that positive feedback is not constructive may lead some students (and supervisors) to devalue it or not focus on it sufficiently.

Another aspect of language noted among participant responses was the preponderance of usage of first-person plural (i.e., "us," "we") relative to first-person singular (i.e., "I," "me"). This was not noticed at the time of interviews, so no attempt was made to clarify students' intentions or motivations regarding their pronoun usage. It may be that the phrasing of the questions triggered more expansive responses rather than personal reflections. For example, "What have been the advantages of having multiple supervisors per rotation?" as opposed to "What do you consider to be the advantages of having multiple supervisors per rotation?" Perhaps some students spoke from knowledge of their classmates having similar opinions or experiences. Plural usage might reflect student assumptions that their experiences or perspectives are normative to all or most

genetic counseling students. Alternatively, it might also feel safer for participants to share from the plural perspective because it reduces their personal responsibility for the content. Finally, use of the "first-person plural may reflect genetic counselor training. Some research indicates use of "we" is common in genetic counselor responses to patients (cf. Kao, 2010). Unfortunately the present study did not address this issue, but further investigation of this phenomenon may deliver useful insights.

Research Question 1: Differences among levels of anxiety in satisfaction with supervision or clinical rotations

Overall, participants reported higher levels of satisfaction with their rotations as a whole than with supervision specifically. Looking at the domains related to positive aspects of rotations as a whole, a potential explanation could be that two of the five domains are not specific to supervision (i.e., Variety of Clinical Experiences and Making a Difference), while two others (i.e., Practical Experience & Skill Development, and Confidence & Comfort) are partially independent of supervision. Supervision is the most prevalent domain, indicating a strong role in overall satisfaction with rotations, but the balance of benefits and challenges for the non-supervision related aspects of rotations may be more positive than supervision itself.

Responses related to positive aspects of supervision focused much more on what the supervisor was doing (e.g., providing feedback) or students' reactions to supervisor actions (e.g., feeling supported or trusted) rather than their own development. Fewer still involved descriptions of supervisor characteristics. Personality types have been theorized to affect the style and efficacy of supervision in psychotherapy (e.g., Kitzrow, 2001; Moore, Dietz, & Dettlaff, 2004), but empirical support has not been found (e.g., Bernard,

Clingerman, & Gilbride, 2011). The results of the current study seem to support this idea that personality type may be less important than the behaviors exhibited by supervisors, yet these are likely related. Though endorsed less frequently, the idea of supervision providing another set of eyes in the room and helping to increase self-awareness aligns with previous conceptualizations of supervision (e.g., Hendrickson et al., 2003; Weil 2000a).

When discussing the positive aspects of their rotations, the high anxiety group was more likely to focus on personal skill development. This may be due to these students having more self-doubt or insecurities related to their skills their rotations. Another possibility is they are more likely to focus on concrete aspects which can be measured or areas in which they receive direct feedback from supervisors via evaluations.

Research Question 2: Differences among levels of anxiety in terms of interactions with patients

Participants' descriptions of the patients they consider the most challenging revealed a broad range, but no domain stood out among the rest in terms of frequency. These findings suggest students are fairly idiosyncratic in who they find most challenging. Had the question been to describe all types of challenging patients, more similarities would be expected. The frequencies across anxiety groups were similar for patients who are resistant to the process, patients for whom students have to adapt their language significantly due to lack of knowledge about genetics or limited English proficiency, and patients displaying strong emotions. The Emotional Patients domain consisted of patients displaying anger, sadness, and grief, suggesting these emotions are particularly challenging for students. Interestingly, no participants discussed highly

anxious patients as the most difficult. This is somewhat surprising, as emotions have been found to be "contagious" (e.g., Jalmsell, Kreicbergs, Onelov, Steineck, & Henter, 2010; Wild, Erb, & Bartels, 2001). Thus, one might have expected high anxiety students to be reactive to highly anxious patients. Perhaps patients express their anxiety indirectly (e.g., seeking more information, asking questions about what they should do). These are the sorts of patient behaviors students can prepare to deal with before sessions. Another possibility is patient anxiety may manifest in ways students do not recognize as anxiety (e.g., anger).

Tentative differences which need further exploration include the low anxiety group not mentioning highly educated patients and the high anxiety group not mentioning over-identifying with patients. Perhaps the low anxiety group felt more comfortable with highly educated clients because they were more confident in their ability to field questions appropriately. The high anxiety group may have an increased focus on themselves during session decreasing the likelihood of seeing themselves in their patients.

Research Question 3: Differences among levels of anxiety in perceptions of clinical supervisors

When discussing what makes a good supervisor, supervisees tended to comment on supervisor behaviors rather than their characteristics. The importance of balanced feedback and balancing support and challenge has been described above. The most commonly described characteristic was the value placed on being available, which related to both physical and interpersonal availability (e.g., invested in the student and in supervision).

Supervisors the students found the most difficult to work with were also described primarily in terms of the behaviors and processes in which they engaged. The only characteristic discussed was inflexibility, and this was the least frequently endorsed domain. This finding suggests students were not attributing difficult supervision experiences to personality flaws or malicious intentions on the supervisors' parts, but rather to correctible behaviors (e.g., not providing clear expectations, not giving both positive and corrective feedback). These descriptions shared much in common with those characterizing poor supervision in mental health fields (e.g., Kozlowska, Nunn, & Cousins, 1997; Magnuson, Wilcoxon, & Norem, 2000; Nelson & Friedlander, 2001; Wulf & Nelson, 2000). Several of the processes discussed are also similar to the "supervision games" described by McIntosh, Dircks, Fitzpatrick, and Shuman (2006). For example, inconsistent expectations, requiring the student to "mimic" the supervisor's style, and providing only negative feedback were all among the power-related games initiated by supervisors as reported by McIntosh et al. (2006).

The high anxiety group was more likely to discuss supervisory relationship issues when describing difficult supervisors. The high anxiety group was also more likely to bring up communication issues with supervisors as a challenge of supervision. This suggests these participants may be more sensitive to breaches in their connections with their supervisors, perhaps because their anxiety causes greater scrutiny of the relationship or a greater need for support or reassurance from their supervisors.

Research Question 4: Differences among levels of anxiety in perceptions of the structure or logistics of supervision?

Impressions of live supervision. Regarding live supervision, the most common response was the presence of the supervisor provides students with a safety net in case they need help in session. This finding is consistent with previous research on live supervision in genetic counseling (Hendrickson et al., 2002). Supervisor assistance with information was the most frequently described category for both groups, suggesting supervisors' experience and knowledge play a critical role for students. Improved training and feedback were also highlighted in the present study and Hendrickson et al.'s (2002) study.

Hendrickson et al.'s (2002) reported limitations of live supervision also align closely to the present results. Students in both studies reported experiencing anxiety when the supervisor was present. Interestingly, the tendency to report increased stress or anxiety did not differ across anxiety groups in the present study, suggesting the experience of anxiety in this context is fairly universal. The themes of changing their behavior to fit the supervisor's desires rather than patient needs, deferring too easily or relying too much upon the supervisor, and thinking some supervisors were overly involved in the students' sessions were also consistent across studies.

The low anxiety group was more likely than the high anxiety group to describe the supervisor's ability to provide answers to questions when they did not know the answer as advantageous. Perhaps the high anxiety group was more embarrassed to seek the supervisor's help in session because they felt they should have been more prepared. The low anxiety group was also less likely than the high anxiety group to mention a supervisor being able to provide guidance when the student does not know what to do next in session. It could be that low anxiety participants are less likely to experience

these situations and/or are less likely to turn to their supervisors for help when they feel unsure of how to proceed. In the latter case, they may be more comfortable forging ahead despite their uncertainty because the supervisor is there to adjust the course of the session if necessary. It is also possible the low anxiety group may view supervisors who provide direction to the session as intrusive to their own sense of where the session should be heading. Studies could be done to explore these speculations.

Impressions of multiple supervisors. The predominant response to the advantages of multiple supervisors was the opportunity to see how different genetic counselors approach their work. Being able to see the different styles manifested in actual genetic counseling sessions was by far the most prevalent domain, regardless of anxiety group. As for the disadvantages of multiple supervisors, having to manage multiple sets of expectations was the most commonly described challenge. Many students felt they had to adjust their counseling for each supervisor in order to receive positive evaluations, which leads to the next most common domain of working to please the supervisor rather than focusing on their growth or the needs of the patient. As this is the students' perspective, it is unclear whether conforming to supervisors' desires is appropriate in every situation. Further research incorporating the perspectives of students, supervisors, and perhaps third-party evaluators would help to determine when students are ready to follow their own clinical instincts. Nevertheless, it is important for both students and supervisors to be aware of students' perspectives.

Research Question 5: Differences among levels of anxiety in perceptions of supervision processes

Balance of supervisee-focus and patient-focus. Only a few participants reported approximately equal time for both or being heavily focused on the supervisee. When asked about their ideal situation, the range again varied, but an equal balance was the most common response (though a few participants commented the balance would depend on the specialty of the rotation). The high anxiety group was more likely to prefer a moderate skew toward themselves and a heavy skew toward the patient. The low anxiety group predominantly reported desiring an even split between self and patient-focus or a moderate skew toward the patient. This high anxiety group, however, was more broadly distributed across the range of options. The split among the high anxiety group in terms of desiring both patient and supervisee skewed focus may reflect willingness to discuss their own reactions or impressions. Those who are willing may want to spend more time on these reactions or want more clarification (either confirmation or refutation) regarding their performance or their interpretations of the session. Others may fear corrective feedback or be so uncomfortable discussing themselves that they prefer more time be spent on the patient. No participants reported a preference for having supervision focus heavily on themselves, which is likely appropriate given their level of professional development at the time of interviews.

Balance of supervisee and supervisor control of content. Participant reports of the average balance between who leads supervision sessions also spanned a broad range. The most common response was the responsibility for determining content was equally shared. Only two participants reported having the vast majority of control over the content of supervision, which is likely appropriate given students' level of professional development at the time of the interviews. When discussing the ideal balance, the most

common response across groups was to split the responsibility equally. Thus, supervisees seem to find more consistency between their experience and desires in this aspect of supervision than the focus of conversation. This is somewhat perplexing since if supervisees control half the content, what prevents them from steering the conversation more toward their ideal focus? Follow-up research asking specific questions about these dynamics may help explain this phenomenon. The high anxiety group was more likely to prefer an equal split but did not have any participants describe a skew toward themselves. This may reflect a hesitation to feel in control or a fear of missing out on valuable supervisor feedback. They may also trust their own impressions less and desire the supervisor's assessment of how well they perform during genetic counseling sessions.

Frequency of discussion about the supervisory relationship. Responses to how frequently participants had discussed the supervisory relationship with their supervisors produced a wide variety of responses. The majority of participants said the relationship was discussed either rarely or not at all. The low anxiety group was less likely to say they rarely discussed the supervisory relationship but more likely to report never discussing it. Perhaps the high anxiety participants tended to test the relationship because they wanted more reassurance or support from their supervisors. Or it could be their supervisors were more likely to initiate such conversations because the high anxiety participants might be less likely to open up to their supervisors. Research investigating supervisor perceptions of how they provide supervision to student varying in their level of anxiety might help to explain these differences.

Several participants in each group commented that talking about the relationship was typically not necessary, as they had predominantly positive interactions with their

supervisors. These findings are somewhat concerning given that problems in the supervisory relationship was the second most common domain when participants discussed the most difficult supervisor with whom to work. Perhaps if more conversations about the relationship were happening early in the rotation and students felt safe enough to voice their concerns before they became problematic, some of these supervisory relationships would not been seen as so difficult. In the psychotherapy literature, poor supervisory working alliance has been connected with non-disclosure of information from supervisees to supervisors (Ladany, Hill, Corbett, & Nutt, 1996). This may be of slightly less importance in genetic counseling training given the prevalence of live supervision (Lindh et al., 2003), but research regarding non-disclosure in genetic counseling supervision may uncover some significant material not being shared by supervisees.

Most uncomfortable discussions with supervisors. There were few group differences related to these topics, suggesting anxiety was not a critical variable in classifying uncomfortable conversations with supervisors. This is surprising, as one would have thought more anxious students would have difficulty conversing about issues with which less anxious students would be comfortable. When asked about personal conversations the most common response among both actual and hypothetical responses concerned boundary crossings. Comments centered primarily around three types of concerns: sharing personal values (e.g., political values, religious beliefs) would cause supervisors to be less objective; supervisors sharing information about other students; and being asked to disclose personal medical history. These findings are comparable to those of Gu et al. (2011), who surveyed genetic counselors and students about boundary issues.

The two themes Gu et al. found among students were academics (e.g., a supervisor discussing how another student was performing) and social.

For both clinical and personal topics, no more than half of those who could recall no uncomfortable conversations described a hypothetical conversation. It seems unlikely that so many supervisees could not imagine anything uncomfortable to discuss for either question, suggesting social desirability may have played a role in responses to these questions. Another possible explanation involves the way participants interpreted the meaning of "most uncomfortable" in the question. This possibility is further discussed in the limitations section below, along with other ways phrasing the questions may have influenced the results.

Research Question 6: Differences among levels of anxiety in perceptions of how anxiety personally affects them in clinical rotations in general or supervision in particular

Predictably, the low anxiety group overwhelmingly did not consider themselves anxious people, while the high anxiety group overwhelmingly did. Perhaps the most interesting aspect of this question is the three participants in the low anxiety group who considered themselves anxious people and the four participants in the high anxiety group who did not. One wonders what criteria these participants were using to judge themselves. Perhaps in their families or social groups they are more or less anxiety prone than other people, so their comparison group may determine their own identification. Further research could explore the criteria people use to judge themselves in terms of anxiety proneness.

When specifically discussing the effect of anxiety during supervision, the high anxiety group was more likely to comment that the effect varied depending on the supervisor, saying their level of comfort and feeling of safety with each supervisor dictated how much anxiety impacted them. This may be another reason why the high anxiety participants seemed more focused on the supervisory relationship, as there may be an increased need for a positive relationship in order to perform well.

Research Question 7: Differences among levels of anxiety in strategies used to manage anxiety or the perceived efficacy of these strategies

There were many domains and categories related to anxiety management, which makes sense given the multitude of possible strategies, personal preferences, and individual differences in what people find relaxing. The majority of participants reported using multiple methods, which demonstrates flexibility and adaptability in their self-care. The use of behavioral, physical, social support, and cognitive strategies were fairly consistent across anxiety groups, suggesting broad methods for managing anxiety do not differ by anxiety proneness. Of note, a new domain related to support received from supervisors arose in the clinical context. While not frequently endorsed by either anxiety group, it is promising that some participants were comfortable enough with their supervisors to reach out to them in these situations. The majority of participants also reported using the same strategies in these situations as they do for any other anxiety in their life, though this was more common among the low anxiety group. Organization was consistently described across anxiety groups. Thus, it seems activities such as making lists, employing solid time management, and taking time to plan are fairly beneficial regardless of how anxiety prone one is.

Similarities to Genetic Counseling Supervisor Competencies

The present results intersect with recently published genetic counseling research, in particular, a study establishing 158 preliminary supervision competencies for genetic counselors (Eubanks Higgins et al., 2013). The current results provide an interesting comparison in that this study focused on student perspectives, while Eubanks Higgins and colleagues used a Delphi method to determine supervisor competencies from the perspectives of supervisors and program directors. Results of this study are largely consistent with the competencies put forth by Eubanks Higgins and colleagues (see Table 18 for the domains and categories from the present study which align with the competencies). Perhaps students are more focused on certain roles or responsibilities of supervisors, may be unaware of other responsibilities, and/or view some aspects of supervision as automatic and not necessary to mention. It must also be remembered the present study was focused on supervisee experiences rather than their perceptions of supervisor competencies per se.

Some aspects of student responses, however, are not as prominent in the supervision competencies. For example, students commented most frequently on the importance of balanced feedback when describing a good supervisor, and this is not explicitly in the supervision competencies. The competencies do include items which state supervisors provide "honest," "specific," and "objective" feedback, "Comment on positive changes made by students in response to feedback," and "Provide both verbal and nonverbal supportive feedback" (p. 47). Thus, the competencies do encourage supervisors to provide positive feedback in addition to which match their competencies), though the competencies are more comprehensive than the

Table 18

Domains and Categories Consistent with Published Supervision Competencies

Positive Attribute in Current Study	Negative Attribute in Current Study	Supervision Competency[a]
IQ #4: Good supervisor	IQ #7: Difficult supervisors	
Supervisor Behavior	**Supervision Processes**	
Set clear/explicit expectations	*Inconsistent/unclear expectations*	Delineate supervisor expectations
Balance support & challenge		Provide a balance of challenge and support appropriate to student developmental level and experience
Give specific feedback	*Vague or missing feedback*	Provide feedback that is specific
Supervisor Characteristics		
Available		Are accessible to students
Flexible/open-minded	**Supervisor Inflexibility**	Are flexible
Supportive/encouraging		Create a positive learning environment through being encouraging, motivating, and respectful
Kind/caring/ compassionate		Show empathy when interacting with students
IQ 5a: Benefits of live supervision	**Supervisory Relationship**	Engage with students to establish a mutually trusting relationship/ working alliance
Safety Net	*Lacking comfort or connection*	
Confidence/comfort	IQ 5b: Disadvantages of live supervision	
	Internal Reactions	
	Stress/anxiety of being watched	Recognize some anxiety is normal
	Lack of independence	Encourage student autonomy, as appropriate
	IQ 6b: Disadvantages of multiple supervisors	
	Communication between Supervisors	Collaborate with colleagues also supervising the student if compiling a mid-point or final evaluation

Note. [a]from Eubanks Higgins et al. (2013); IQ = Interview Question; domains are presented in **bold**; categories are presented in *italics*.

corrective feedback, but the ratio of the two is not specified. Students clearly, however, desire a balance between the two.

Students in the present study described good supervisors as those who are flexible and provide room to grow, while bringing up issues of supervisor inflexibility and feeling held back by supervisors who make them "start over" at the beginning of a new rotation. Interestingly, the competencies also call for supervisors to have students complete observations, even in advanced rotations, and work on co-counseling with students. So it is possible students are perceiving observations or supervisors co-counseling as moving backward rather than progressing, while their supervisors are behaving appropriately in terms of assessing student skills and providing opportunities for co-counseling. If supervisors do not provide explicit expectations and a rationale for the students' activities at the outset of supervision, this could be interpreted by students as a lack of trust and leave them frustrated by what they perceive as overly controlling supervision.

Where the student responses seem potentially in conflict with the competencies, it appears to be more of a matter of frequency or degree rather than disagreement with the aspect of supervision. For example, a few students listed supervisor interruptions (step-ins) as one of the disadvantages of live supervision, while the competencies clearly instruct supervisors to "intervene during sessions to direct students towards presenting information in a logical, concise, and clear manner as needed to ensure patient care" (p. 49). Of note, the present participants were not referring to the fact that supervisors ever intervene, rather they felt some supervisors interjected too frequently or did not turn control of the session back over to them.

One area where the results of the present study do appear to diverge from the supervision competencies relates to the supervisory relationship. The competencies state supervisors "Elicit and are open to candid and ongoing feedback from the student about the supervision experience" (p. 46). The most frequent responses of students in the present study when asked how often they have discussed the supervisory relationship with their supervisor, however, were Rarely, Never, and Not Necessary. Thus, students reported not regularly engaging in these types of conversations and/or did even not find them relevant. These results may be an artifact of student satisfaction with their supervisors, as many of those in the Not Necessary category reported everything was going well so there would be nothing to discuss.

It is possible supervisors raise the issue but students are not interested or willing to engage in the conversation. Indeed, a number of the uncomfortable conversations supervisees reported (both actual and hypothetical) concerned not feeling comfortable enough to disagree with the supervisor, fearing how the supervisor would interpret their emotions, or boundaries in the supervisory relationship. A few even said simply talking about interpersonal dynamics with their supervisors would be uncomfortable.

The other area of divergence concerns a topic students in the present study did not mention, namely cultural competence. Cultural competence appears in several places in the supervision competencies (e.g., encouraging readings and learning opportunities, discussing cultural aspects of cases with supervisees, including culture in conceptualization of supervisees), but none of the participants in the current study explicitly discussed this critical skill. The closest reference was two participants discussing the challenge of working with interpreters. It is unclear why this issue was not

addressed by participants. It may be that since participants knew this was a study about anxiety they discussed aspects of supervision most likely to amplify or reduce their own anxiety, and their own or their supervisors' cultural competence was not yet a priority. Perhaps discussion of cultural factors is such a common occurrence it is taken for granted among students. Alternatively the students in this study may have dealt primarily with people from their own cultural background, so these conversations were uncommon and/or they did not consider them a salient aspect of their experience. It could be that supervisors interwove these aspects into other conversations so smoothly students were not aware of culture as a separate topic. Or it is possible these conversations simply did not happen. Prior research (Lee, McCarthy Veach, & LeRoy, 2009) suggests a wide range in multicultural awareness and knowledge among genetic counselors, so supervisors may be less attentive to these issues relative to other topics.

Study Limitations

Several factors must be taken into account when considering the results of the present study. The initial survey sample had a useable response rate of 40%, which means a substantial number of 2nd year genetic counseling students did not participate. Thus the anxiety thresholds used to classify interview participants may not be reflective of the population as a whole. Indeed, the overall trait anxiety levels of participants in the present study was considerably less than levels reported in previous studies (e.g., Jungbluth et al., 2011). It is unclear whether this is related to cohort differences, sampling error, or other factors.

The decision to use percentile splits to create groups was a rational choice, but does not guarantee qualitatively different groups. Many participants were near the

cutoffs and a few small changes to their responses could have led to a different classification. Classifying continuous variables such as anxiety into discrete categories is controversial and somewhat arbitrary (for an overview of the issues involved see Preacher, Rucker, MacCallum, & Nicewander, 2005), though the criticisms of such classification typically focuses on quantitative research. The average trait anxiety levels were quite different across groups and, as described above, participants' self-classifications largely agreed with the empirical classifications, but alternative group formations (e.g., high/low median split) would very likely have yielded different results.

As for the interview sample, several of the participants with the highest trait anxiety levels did not respond to interview requests. The average trait anxiety score did not differ between the survey and interview samples for the high anxiety group, but one wonders whether the experience of those with the highest anxiety level may have added to the analysis. Also, none of the interview participants reported being dissatisfied with either their rotations or their supervision. While the population of those who are dissatisfied with these aspects of their training is hopefully small, the lack of their perspectives in this study makes application of the present results to this group a speculative endeavor.

The current study also only includes those with relatively little supervision experience. The interviews were conducted between August and October of 2011, which meant participants had ~7-9 months of supervised experience remaining before graduation. Perceptions of supervision will likely shift over their remaining time in rotations, so it would be valuable to compare these results to data collected at or near the end of students' supervised experiences. Another related issue is the present sample had

varying amounts of experience with supervision due to the fact that training programs begin rotations at different stages of training. All participants had some experience working with supervisors, but differences were not factored into the analysis in any way. Future research exploring the impact of amount of experience would be beneficial.

Participants' experience also influenced how they responded to specific questions. For example, some questions asked about experiences the students may not have had yet (e.g., describing the most difficult supervisor with whom to work). Some responses were categorized based on whether or not the content was hypothetical (e.g., responses to questions about uncomfortable conversations) but participants were often not explicit about distinguishing between lived and hypothetical situations. Similarly, comparisons between participants' impressions of good supervisors vs. difficult to work with supervisors may have been influenced by question phrasing. The "good supervisor" question asked about supervisors in general, while the "difficult supervisor" asked participants to picture a specific supervisor. Stronger parallels could be drawn if both questions were more similar.

When asking if participants considered themselves to be anxious people, a definition of anxiety was not provided. This was by design, as the present study was interested in their natural self-classifications, but the study could have been improved by asking participants to define "anxious person" to allow for more nuanced understanding of the rationale for their classification. This information could also have shed more light on the validity of using empirical cutoffs for group formation as opposed to self-identification.

Another aspect of the questions which may have influenced participant responses was the difficulty involved in "averaging across" all previous supervisors. Several participants directly commented on the challenge of doing this meaningfully, and others likely felt similarly and did not vocalize it. While it is valuable to try to understand "typical" supervision, a more informative way to obtain this information might have been to ask about each participant's favorite and least favorite supervisor, most effective and ineffective supervisor, or the supervisor who was the most extreme in either direction. Supplementing the existing question with one or more of these inquiries may have provided a better sense of the diversity of experiences and could be explored in follow-up studies. Some participants also expressed difficulty separating patient focus from self-focus in supervision, as they would frequently interweave these topics (i.e., discuss the clinical importance of a question asked in session alongside their personal reaction to the patient's responses). Thus it is unclear the extent to which that question provided accurate results.

Given that only students were interviewed, the perspective of supervisors and others involved in student training were not captured by the present study. Triangulation should be sought through future research investigating perspectives of these other groups involved in training. Regardless of the congruence between student and supervisor impressions of the experience of supervision, the present study provides valuable insights into how the experience is perceived by one half of the supervision dyad.

One potential issue with the method for assessing group differences in domains and categories occurs when there is a group which does not have any responses for a specific domain or category. If the other categories have responses, this was labeled as a

moderate likelihood of differences. While this seemed a reasonable approach before coding began, in practice a number of times this led to situations where a group would have a single participant and the other group had none. It is unclear how appropriate the label of moderate likelihood of differences is in these situations.

Practice/Training Recommendations

The results of the present study suggest several places where intervention could enhance the experience of student supervisees. The quality of the supervisory relationship seems to underlie numerous aspects of students' experiences in supervision. Participants tended to bring it up, however, primarily in the context of problematic situations. Ideally, ongoing assessment and discussion of the relationship could help prevent some of the challenging issues reported in this study. Thus an important intervention for supervisors, particularly for anxious students, may be to spend extra time and energy building rapport and strengthening the supervisory relationship. Such efforts might allow students to participate optimally in supervision. Anxiety during supervision was found to be common in the present study, so part of this early rapport building may include normalization of anxiety. This is consistent with previous recommendations for supervisors (cf. Borders, Eubanks, and Callanan, 2006; Eubanks Higgins et al., 2013).

Supervisors may need to initiate conversations about the relationship early, as the power differential may be too much for supervisees to feel comfortable doing so. Supervisors should also continue to revisit the topic, as relationships are dynamic and students may not be willing to share concerns. As a number of the high anxiety participants described not speaking up in supervision, supervisors should not assume a supervisee's lack of discussion means everything is fine. Supervisors may also have to

explain the purpose of these conversations, as a number of students said discussing the relationship was not necessary. In addition to benefitting the supervisory relationship, such conversations could provide numerous opportunities for discussion of parallel processes with patients, such as building rapport, non-verbal communication, and assumptions.

Given the impact of feedback on students' perceptions of training broadly and supervision specifically, feedback should be a focal point for both supervisors and supervisees. Supervisors can work to maintain a balance between reinforcing strengths and providing corrective feedback. Supervisees can shape some of the feedback they receive through directing the course of supervision to specific areas or framing questions to their supervisors to encourage discussion (e.g., "I see what you consider the cons to how I handled that situation, but were there any pros to that approach?"). Supervisors could also verbalize their thought processes behind their evaluations, similar to the Thinking Aloud approach advocated by Borders et al., (2006). If framed properly, Socratic questioning could potentially be used as an exercise to model self-supervision skills.

Supervisees may also need additional discussions about expectations and the rationale for why things are done the way they are. This may be require additional time at the outset of rotations, but would likely prevent misunderstandings later. Perhaps some of the common issues could be incorporated into a supervisory disclosure statement (cf. McCarthy Veach & LeRoy, 2009). Articulating expectations in writing would likely help anxious supervisees navigate entering new rotations as they would have to discover fewer "unwritten" rules.

While the supervision competencies (Eubanks Higgins et al., 2013) call for supervisors to "Seek to lessen students' anxieties and help students find productive ways to manage anxiety" (p. 46), they do not provide any direction for doing so. Supervisors may benefit from workshops or seminars in methods for helping their supervisees reduce anxiety. Supervisors might then be more effective in helping supervisees work through anxiety both with patients and with supervisors.

Supervisees can also take a more proactive approach to learning to manage their own anxiety. Successful interventions have been demonstrated among therapists in training (e.g., Abel, Abel, & Smith, 2012; Shapiro, Brown, & Biegel, 2007) using programs focusing on mindfulness to cope with the stress of training and professional practice. Similarly, psychotherapy research has found experienced therapists engage in more thought stopping techniques than novice therapists to manage distracting self-awareness (Williams, Polster, Grizzard, Rockenbaugh, & Judge, 2003). Perhaps such techniques could also be integrated into genetic counseling training. In counseling psychology, the management of anxiety was even included as one of the proposed competencies for the field (Ridley, Mollen, & Kelly, 2011). Further attention to anxiety management in genetic counseling programs and rotation sites may help encourage students to take steps toward addressing their own anxiety. Workshops could focus on self-care strategies, teaching students skills which would serve them throughout their careers and be potentially useful with patients in highly anxious states. Discussions of the benefits of psychotherapy may also be helpful for genetic counseling students. None of the present participants mentioned receiving therapy as a method for managing

anxiety, while this was the sixth most common coping strategy in a recent survey of psychology trainees (El-Ghoroury, Galper, Sawaqdeh, & Bufka, 2012).

Research Recommendations

Given the findings and limitations of this study, additional investigations of the effects of anxiety on the experience of genetic counseling students in supervision are warranted. The present sample consisted of only two males and six students of color, and while this is fairly representative of the population of genetic counseling students, these students may have different experiences. Future qualitative studies could target these populations more specifically.

The differences between the current sample and Jungbluth et al.'s (2011) in terms of trait anxiety levels demonstrates the need for further investigation of anxiety trends among genetic counseling students. Given the potential contextual influences on trait anxiety described in the limitations section, a potential solution would be to survey several cohorts of students at multiple times throughout the year. Such a project would allow for better understanding of the ebb and flow of anxiety during training and provide more stable estimates of anxiety prevalence in the population.

Several participants mentioned their responses would vary depending on the setting of the rotation. Therefore, more focused research could target separate specialties to investigate, for example, whether student experiences in prenatal rotations differ in salient ways from their experiences in cancer rotations. While it is likely numerous aspects of the experience would be similar (e.g., desiring balanced and specific feedback, feeling stress or anxiety due to the supervisor's presence), there may be important differences which could affect students' perceptions (e.g., the balance of focus in

supervision, nature of challenging conversations with supervisors). Additionally, further examination of experiences related to patients served at the clinic (e.g., SES, education level, English-language proficiency), characteristics of the clinic (e.g., regional differences, urban vs. rural, number of supervisors), and students' training programs (e.g., presence of support groups, program-based supervision, point in training when students begin rotations) may help tease apart aspects of the experience which are "universal" versus those which are context-dependent.

Given the reported importance of feedback received from supervisors by the participants in this study, further exploration of the content and processes of feedback is needed. Follow-up studies could more explicitly track the influence of feedback on numerous supervisee perceptions and behaviors. Additional attention should be paid to identifying specific needs supervisor feedback satisfies for students. Students who desire feedback to feel challenged, for example, may seek or receive feedback from supervisors very differently than those who desire reassurance. Supervisors and supervisees would benefit from further understanding of the dynamics at play in this critical process.

As stated in the limitations section, the present results are based solely on the impressions of students. Future research should investigate the perceptions of supervisors and others involved in student training (e.g., program directors) to triangulate the findings. As many of the present students reported anxiety related to being a supervisee, it is reasonable to hypothesize becoming a supervisor will trigger some of the same issues once students enter the professional ranks. Thus investigation of supervisors' own anxiety in addition to their perceptions of supervisees' anxiety would yield valuable insights. Studies involving actual supervision dyads would be particularly

valuable, as a variety of interactions could be videotaped (e.g., session preparation, patient sessions, debriefing sessions) and analyzed using Interpersonal Process Recall methods (e.g., Kagan, 1980; Kagan, 1984) and/or third-party observers.

Also discussed in the limitations section, participants in the present study had a variable amount of clinical experience, although they all had approximately the same amount of time left before their anticipated graduation. Future studies could be structured to control for amount of clinical experience, which may increase heterogeneity of results somewhat. Further research should also investigate student perceptions at different points in their training, for example near the end of their clinical rotations. It would also be interesting to examine students' perceptions before beginning their clinical rotations to learn what their expectations are relative to supervision and trace how their experiences either confirm or refute their initial expectations. Researchers could investigate how the experiences of being a supervisee influence one's supervisory style after students graduate and take on supervisees of their own. While receiving supervision as a professional is less common (Weil, 2000b), it is becoming more so (Zahm, McCarthy Veach, & LeRoy, 2008), and exploration of experiences in this setting related to anxiety would provide an interesting comparison to those reported in the present study.

The suggestions provided in the Practice/Training Recommendations for how supervisors could help supervisees address anxiety are largely based on the psychotherapy literature. Developing interventions specific to genetic counseling are recommended. The first step toward doing so would be to determining what genetic counseling supervisors already do. Building from such a framework while incorporating

successful interventions from other fields would create efficient methods for improving the experience of trainees in genetic counseling.

Although 40 interviewees comprise a large sample for a qualitative study, quantitative follow-up research should be conducted to help establish the extent to which the results are representative of the population of genetic counseling students receiving supervision. Survey methodology could be implemented to establish a baseline of supervisee perceptions of supervision, which could then be used to track shifts in supervisee perceptions as the genetic counseling field continues to develop its model of supervision and validates supervision competencies such as those initially proposed by Eubanks Higgins et al. (2013). A quantitative analysis would allow researchers to partition the variance across salient variables (e.g., trait anxiety, experience, some measure of supervisee skills such as evaluations, GPA, or demographic factors) and treat anxiety as a continuous variable.

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Appendix A: Training Director Email Invitation

Dear Genetic Counseling Program Director:

My name is Ian MacFarlane and I am a doctoral student in counseling psychology at the University of Minnesota. For my dissertation, I am conducting a study of how genetic counseling students' anxiety levels affect their experience of clinical supervision. **The goal of this study is to provide further information about anxiety to help guide future training of genetic counseling students**.

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.

I am asking for your help in forwarding the attached study invitation to your genetic counseling graduate students. This study contains two phases. Participation in the first phase of the study consists of completion of a one time, online survey that takes approximately 10 minutes to complete. Participation in the second phase of the study consists of two interviews approximately 30 minutes in length, one in August of 2011 and one in April or May of 2012. Participants who complete the first interview will be contacted in early spring of 2012 to confirm contact information for April. Participation in the first phase does not require participation in the second, though participation in the second phase will be offered only to those students who complete the first phase. The survey is anonymous, the interviews will be confidential, and your graduate students' participation will not affect their current or future relations with the University of Minnesota.

If you have questions, you may contact Ian MacFarlane (macf0010@umn.edu or 712-703-0991), 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.

Again, I appreciate your help in extending this study invitation to your graduate students. Thank you very much for your time and assistance with this study.

Sincerely,

Ian MacFarlane, M.A.
Doctoral Candidate
Counseling Psychology – Department of Educational Psychology
University of Minnesota

Appendix B: Student Email Invitation

Dear Genetic Counseling Student:

My name is Ian MacFarlane and I am a doctoral student in counseling psychology at the University of Minnesota. For my dissertation, I am conducting a study of how genetic counseling students' anxiety levels affect their experience of clinical supervision. You were selected as a possible participant because you are enrolled in a graduate program in Genetic Counseling.

This study is being conducted by Ian MacFarlane, a doctoral student in counseling psychology at the University of Minnesota, 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.

We ask that you read the following information and contact us with any questions you may have before beginning the survey.

Background Information:

The goal of this study is to provide further information about anxiety to help guide future training of genetic counseling students. To that end, this study will ask you to complete an inventory to assess current anxiety levels and anxiety-proneness to get an estimate of the prevalence and intensity of anxiety among genetic counseling students. This study will also ask you to participate in two interviews to provide further information about your experiences in supervision. The results of this study will be used to provide research and training recommendations for the field of genetic counseling.

Procedures:

This study contains two phases. Participation in the first phase of the study consists of completion of a one time, online survey that takes approximately 10 minutes to complete. Participation in the second phase of the study consists of two interviews approximately 30 minutes in length, one in August of 2011 and one in April or May of 2012. If you choose to participate in the interviews, you will be contacted in the spring of 2012 to verify your contact information for the second interview. We encourage you to complete the survey phase even if you are not interested in the interview phase. In order to be eligible for the interview phase, you must have completed the survey phase. Not everyone who volunteers for the interview phase will be selected to participate. All volunteers will be informed of whether or not they have been selected by September 31st, 2011.

Risks and Benefits of Being in the Study:

The expected risks of participation in this study are discomfort arising from responding to items about anxiety and discomfort arising from sharing experiences or fears related to supervision. Information you provide will be kept confidential and any identifying material will be stored separately from data collected.

Should you feel the need to process your experience in this study or if issues arise as a result of your participation in this study, you are strongly encouraged to contact your institution's counseling center or a private mental health provider.

There are no immediate or expected benefits for you for participating in this research beyond having an opportunity to discuss and reflect on your experiences and/or expectations for supervision.

Confidentiality:

Participation in the survey is anonymous and the information you provide can not be linked back to you unless you provide contact information. Participation in the interviews will be kept confidential. In any sort of report we might publish, we will not include any information which will make it possible to identify you as a participant. Research records will be stored securely and only researchers will have access to the records. Identifiers and data will be stored separately in a password protected computer. If you have not been selected to participate in the interview phase of the study, all contact information you have provided will be immediately deleted.

Voluntary Nature of the Study

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota or with the investigators. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions

If you have questions, you may contact Ian MacFarlane (macf0010@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, contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; telephone (612) 625-1650.

Survey Link

The link to enter the survey is:

http://edu.surveygizmo.com/s3/590323/GC-Supervision-Anxiety

The password to enter the survey is **student**

Thank you for your time and consideration.

Sincerely,

Ian MacFarlane

Ian MacFarlane, M.A.
Doctoral Candidate
Counseling Psychology – Department of Educational Psychology
University of Minnesota

Appendix C: Initial Survey

Section I – Demographics

1. Will this coming academic year (2011-2012) be your second year in your program?
   a) Yes
   b) No
2. Will you have started clinical rotations by September 15th, 2011?
   a) Yes
   b) No

Insert Bernard & Goodyear's (2009) definition of clinical supervision

3. Have you received formal clinical supervision while working in a health services field OTHER THAN genetic counseling (e.g., medicine, social work, mental health)?
   a) Yes
   b) No
4. What is your gender?
   a) Male
   b) Female
   c) Transgender
   d) Other (Please specify) _____
   e) Prefer Not To Answer
5. What is your ethnicity
   a) African American
   b) Asian/Pacific Islander
   c) Caucasian
   d) Hispanic/Latino(a)
   e) Native American/Alaskan Native
   f) Multi-racial
   g) Other (Please specify) _____
6. What is your age?
   _____ years
7. What is your relationship status?
   a) Divorced
   b) In a committed, long term relationship
   c) Married
   d) Single
   e) Widowed
   f) Other (Please specify) _____
8. What is the highest level of education you have completed?
   a) High School or less
   b) College Graduate (BA/BS)
   c) Master's Degree (MA/MS)
   d) Ph.D.

e) M.D.
f) Other Professional Degree
g) Other (Please specify) _____

9. How many students are in your cohort?
   a) 6 or less
   b) 7 or more
10. In what country is your program located?
   a) USA
   b) Canada
   c) Other (Please specify) _____

Section II – Trait Anxiety Scale of the STAI

Directions

A number of statements which people have used to describe themselves are given below. Read each statement and then mark the appropriate circle to the right of the statement to indicate *how you generally feel*.

	Almost Never	Sometimes	Often	Almost Always
1 I feel pleasant	○	○	○	○
2 I feel nervous and restless	○	○	○	○
3 I feel satisfied with myself	○	○	○	○
4 I wish I could be as happy as others seem to be	○	○	○	○
5 I feel like a failure	○	○	○	○
6 I feel rested	○	○	○	○
7 I am “calm, cool, and collected”	○	○	○	○
8 I feel that difficulties are piling up so that I cannot overcome them	○	○	○	○
9 I worry too much over something that really doesn’t matter	○	○	○	○
10 I am happy	○	○	○	○
11 I have disturbing thoughts	○	○	○	○
12 I lack self-confidence	○	○	○	○
13 I feel secure	○	○	○	○
14 I make decisions easily	○	○	○	○
15 I feel inadequate	○	○	○	○
16 I am content	○	○	○	○
17 Some unimportant thought runs through my mind and bothers me	○	○	○	○
18 I take disappointments so keenly that I can’t put them out of my mind	○	○	○	○

19 I am a steady person	○	○	○	○
20 I get in a state of tension or turmoil as I think over my recent concerns and interests	○	○	○	○

Section III – Invitation to Interview Portion of Study

Thank you for completing the survey phase of this study!

If you are interesting in participating in the interview phase of the study, please provide your contact information below. Remember that the interview phase consists of two interviews, each approximately 30 minutes in length; one in August or September of 2011 and one in April or May of 2012. Not everyone who volunteers will be selected for the interview phase, and if you are not selected your contact information will be deleted. All volunteers will be notified of whether or not they have been selected. Participation in the interview phase is completely voluntary, and you can withdraw from the study at any time without consequences.

1. Would you be willing to participate in the interview phase of this study?
   a) Yes
   b) No

**If answer is "Yes" participants are asked to provide the following information

2. What is your name?

_____

3. What is your email address?

_____

4. What is your phone number?

_____

5. How would you prefer to be contacted to schedule a time for interviews?

a) Email
b) Phone

If "Phone," what are the best days and times to call you?

_____

c) Other (Please specify) _____

Appendix D – Interview Protocol

If a participant's answer to a question also answers a later question, when that question is asked, the interviewer will remind the participant that s/he spoke to this already and ask the participant if s/he would like to add anything to the previous response.

A. Remind participant of his or her right to withdraw from participation at any time and obtain consent to record the interview:
    a. "Please remember that participating in this interview is a voluntary process from which you can withdraw at any time without penalty. As part of the research process, our interview will be recorded so that transcripts of the conversation can be analyzed. Do you have any questions? Do I have your permission to record this interview?"
    b. "Thank you. I will now turn on the recorder."
    c. "Now that the recorder is on, could you please restate your permission to record this interview."
B. Define clinical supervision using Bernard & Goodyear's (2009) definition:
    a. "This study is about genetic counseling students' experiences with clinical supervision. For the purposes of this study, the following definition from Bernard and Goodyear will be used:"
    b. "Supervision is an intervention provided by a more senior member of a profession to a more junior member or members of that same profession. This relationship is evaluative and hierarchical, extends over time, and has the simultaneous purposes of enhancing the professional functioning of the more junior person(s); monitoring the quality of professional services offered to the clients that she, he, or they see; and serving as a gatekeeper for those who are to enter the particular profession" (p. 7).
    c. "Do you have any questions about this definition or what is meant by the term clinical supervision?"
C. *If students report having received clinical supervision in a field other than genetic counseling:*
    a. Describe your previous experience(s) with clinical supervision?
        i. For each experience:
            1. When did this experience take place?
            2. With whom did this experience take place?
            3. What type of work were you doing?
            4. How was that experience for you?
    b. Transition back to genetic counseling experience: "Thank you for sharing that background information. For the remainder of the interview, please consider only your experiences with clinical supervision related to genetic counseling."

Interview Questions

1. Overall, how satisfied are you with the clinical experience (e.g., clinical rotations, observations) you have had in your program thus far?
    a. What have been the most positive things about your clinical rotations?
    b. What have been the most difficult things about your clinical rotations?
2. What kind of patients have been, or do you think will be, the hardest for you to work with? Why?
3. Overall, how satisfied are you with the clinical supervision you have received?
    a. What have been the most positive things about clinical supervision?
    b. What have been the most difficult things about clinical supervision?
4. How would you describe a good supervisor?
5. What have been the advantages of having your supervisor sit in on sessions with you? What have been the disadvantages?
6. What have been the advantages of having multiple supervisors per rotation? What have been the disadvantages?
7. What kind of supervisor has been the most difficult for you to work with? If you have not yet experienced a supervisor you have found challenging, what do you expect to be the most difficult kind of supervisor you will work with on rotations? Why?
8. On average, across all supervisors, how much have you talked about your personal reactions and emotions versus talking about patient issues? In an ideal situation, what do you think the balance would be? How much have you talked with your supervisors about your supervisory relationship?
9. On average, across all supervisors, how much of what you talk about in supervision has been decided by your supervisor compared to how much has been decided by you? In an ideal situation, what do you think the balance would be?
10. What has been the most uncomfortable topic for you to discuss in supervision?
    a. What has been the most uncomfortable clinical issue to discuss?
    b. What has been the most uncomfortable personal issue to discuss?
11. Do you consider yourself to generally be an anxious person? Why or why not?
    a. How has or might your level of anxiety help to improve your performance as a genetic counselor?
    b. How has, or might, your level of anxiety get in the way of your performance as a genetic counselor?
    c. How has or might your level of anxiety affect you during supervision?
12. What strategies do you typically use to manage anxiety in your day-to-day life? How well do these strategies typically work for you?
13. To what extent have you used these strategies to deal with anxiety related to your clinical work? How well have these strategies worked in this context?

Appendix E: Interview Phase Invitation Email

Subject Line: Follow Up Interview Request for Study of How Anxiety Affects Genetic Counseling Students' Experience of Clinical Supervision

Body:
Hello,

You recently completed an online survey about how anxiety affects the experience of clinical supervision in genetic counseling students. At the end of this survey, you indicated you would be willing to participate in two interviews to further discuss this topic, one this fall and one next spring. I am writing you to schedule a time for the first interview. The interview is expected to take approximately 30 minutes, but I would like to schedule a 60 minute block of time to be safe.

Please provide me with times (including the time zone) that would work for you between the dates of DATE, to DATE. If you indicate a preferred time(s), I will do my best to accommodate your request. I am willing to conduct interviews in the evenings or on weekends if this would be most convenient for you. I will inform you via email of the interview time and date, and will send a confirmation email 24 hours before the interview. The confirmation email will contain a definition of clinical supervision which will be used in the interview. I will read you this definition at the beginning of the interview, but I recommend you read it ahead of time.

If you are no longer willing to participate in the interview portion of this study, please let me know and you will receive no further communication regarding these interviews.

Please let me know if you have any questions.

Thank you,

Ian MacFarlane, M.A.
Doctoral Candidate
Counseling Psychology – Department of Educational Psychology
University of Minnesota

Appendix F: Interview Confirmation Email

Subject Line: Genetic Counseling Supervision Interview Confirmation

Body:
Hello NAME,

I am writing to confirm our interview appointment for tomorrow, DATE, at TIME. The appointment is for one hour, though the interview will likely take approximately 30 minutes. If this time will no longer work for you, please let me know as soon as possible so we can reschedule. I recommend you find a quiet place to be where you can have some privacy during the interview.

The phone number I have for you is PHONE. If this is not correct, or you would like me to reach you at a different number, please let me know. The number I will be calling you from is 612-703-0991.

The interview will focus on your experience of delivering genetic counseling services and receiving clinical supervision, as well as your perceptions of the effects of anxiety. For the purpose of this interview, the following definition from Bernard and Goodyear (2009) will be used:

Supervision is an intervention provided by a more senior member of a profession to a more junior member or members of that same profession. This relationship is evaluative and hierarchical, extends over time, and has the simultaneous purposes of enhancing the professional functioning of the more junior person(s); monitoring the quality of professional services offered to the clients that she, he, or they see; and serving as a gatekeeper for those who are to enter the particular profession.

You will be reminded of this definition and given the opportunity to ask questions at the beginning of the interview.

Thank you for your willingness to participate, and I look forward to speaking with you tomorrow.

Ian MacFarlane, M.A.
Doctoral Candidate
Counseling Psychology – Department of Educational Psychology
University of Minnesota

Appendix G: Email Informing Interview Volunteers They Were Not Selected to Participate

Subject Line: Update on Study of How Anxiety Affects Genetic Counseling Students' Experience of Clinical Supervision

Body:
Hello,

You recently participated in an online survey about how anxiety affects the experience of clinical supervision in genetic counseling students. At the end of this survey, you indicated you would be willing to participate in two interviews to further discuss this topic. I want to thank you for your willingness to be interviewed, but I have reached my targeted number of participants and will not be conducting more interviews. Best of luck as you finish your degrees and thank you again for your contributions to my study.

Ian MacFarlane, M.A.
Doctoral Candidate
Counseling Psychology – Department of Educational Psychology
University of Minnesota

Appendix H: Bias Bracketing Documents

Expectations for Open-Ended Responses
Bias Bracketing Document

Study Title: *Effect of Anxiety on Genetic Counseling Students' Experiences of Supervision*

I expect students to report being generally satisfied with their clinical experiences, with difficulties focusing on feeling pressure to do everything "right" and managing expectations of multiple supervisors. I think patients where they have to share bad news will be the most challenging. The qualities I expect students to attribute to good supervisors are being available, having patience, and communicating expectations clearly. Regarding having supervisors in session, I think they will say the positive side is having a sense of safety while the negative is feeling more pressure to perform perfectly. For having multiple supervisors, I expect the positives to be getting feedback from different perspectives and increasing the odds of having at least one supervisor they connect with, and the negative to be having to manage different expectations and difficulty integrating conflicting feedback. I think the most challenging supervisors will be those who do not have enough time for the supervisees, do not allow the supervisees enough freedom to make mistakes, and/or those who do not balance positive and constructive feedback.

For the structure of supervision, I expect supervisors will decide on the vast majority of the topics and the conversation will focus heavily on patients with very little time spent on the supervisory relationship. I predict the most difficult things for supervisees to discuss in supervision will be patients with whom they made mistakes and interpersonal issues with the supervisor.

I expect students to consider themselves somewhat anxious people, and see the benefit as being increased attention to preparation and the limitation as having difficulty connecting with patients in session. I think they will see anxiety as affecting supervision as a feeling of dread or apprehension about supervision sessions and/or being hesitant to broach certain topics with their supervisors. As for coping mechanisms for anxiety, I suspect many will talk about exercise and/or nutrition but few will mention seeking support from professionals (i.e., counselors, therapists). I expect them to assess their strategies as moderately successful and have applied them more successfully to their general lives than to supervision specifically.

In general, I expect students to be fairly open and honest during interviews, though a bit uncomfortable with assessing their own anxiety. I think some will have difficulty with the questions because they will not have considered these issues until now. I think some will report being more aware of their own anxiety regarding supervision as a result of being in the study.

Researcher: Ian MacFarlane
Date: 7/28/11

Expectations for Open-Ended Responses
Bias Bracketing Document

Study Title: *Effect of Anxiety on Genetic Counseling Students' Experiences of Supervision*

1. I am anticipating that interviewees will be somewhat satisfied rather than entirely unsatisfied or fully satisfied. I say this because I believe that interviewees will find the study of their program valuable in many ways and will be hesitant to comment on the clinical experience as a whole.
A. Working with clients, learning how to refine counseling skills, improving their understanding of the genetics/science components of their skill set.
B. Working with changing supervisors with varying expectations, uncomfortable client interactions with supervisor presence.

2. Angry or abusive patients because counselors would feel attacked. Taciturn patients may also be difficult to communicate with. In addition, patients who questioned the counselor's authority may be difficult to reckon with.

3. I anticipate a lot of mixed feelings, but in general, the satisfaction will be low due to the lack of uniform standards and procedures in the field to this date.
A. I guess that they may say working with a specific supervisor in particular because the counselor might have formed a connection with that person, felt cared for, or learned a lot from the supervisor.
B. The flip side – working with a difficult supervisor who may have had unclear expectations, challenged him/her without sufficient support, became abusive in some way, etc.

4. Caring, nurturing of the counselor's passion/study, fair, gives clear and effective feedback, provides room to make mistakes and grow, helps counselor find his/her role in the field (mentorship).

5. Advantages: Knowledgeable perspective, advice can be given, constant feedback and growth.
Disadvantages: Anxiety-causing, striving for perfection, no room to make mistakes.

6. Advantages: Variety of perspectives and theories, exposure to varying styles of treatment, more chances to make mentor connections, if you don't like someone you're not stuck with them for long.
Disadvantages: Hard to figure out what is expected of you when there are varied expectations, anxiety-causing to have to adjust to different styles and expectations.

7. They might have characteristics like the following: not as inclined to listen or mentor, perfectionist tendencies, too busy to help, not interested in teaching/supervising, unclear about expectations.

8. My guess would be that the vast majority of time is spent consulting on cases rather than on a mentoring relationship where the counselor could benefit from feedback and a sounding board. Ideally, I believe they hope for a balance that is 75% clinical and 25% personal reactions and growth. I would guess they have talked very little to none about their relationship (largely because they are not with anyone long enough to comfortably tackle this conversation).

9. Likely, most of what is discussed is decided by the supervisor, though more amenable supervisors may open a discussion asking the counselor what he/she thought about what occurred that day. I would guess they would like greater input or at least feel like they were being listened to seriously and thoughtfully.

10. If they dared approach it, discussing the relationship between the supervisor and the counselor would be the most challenging.
A. The most uncomfortable clinical issue may have to do with what the counselor feels is his/her weaker skills, one he/she feels most vulnerable about.
B. The most uncomfortable personal issue….relationship with supervisor?

11. Most will probably rate themselves fairly low on the anxiety scale based on what we know about the anxiety levels of people who tend to go into this field.
A. More anxious can keep you on your toes, but it can also make you overthink your decisions and question yourself too much.
B. Could affect client interaction and cause miscommunication and other stresses. Could also diminish the emotional and mental well-being of the counselor so his/her work suffers (as well as personal life).
C. Making mistakes, questioning self

12. A variety of stress relief activities: yoga, exercise, meditation, hobbies, family time, etc.
I would guess the effectiveness of the strategies has a relationship to how long the person has been using these strategies for stress relief and/or how he/she is aware of the effectiveness of them for him/her.

13. They may not be used to specifically deal with this particular problem, but no doubt they will be used if the person uses them to help with anxiety (if he/she is experiencing anxiety in their clinical work).

Researcher: Janelle Mayer
Date: 9/26/11

Expectations for Open-Ended Responses
Bias Bracketing Document

Study Title: *Effect of Anxiety on Genetic Counseling Students' Experiences of Supervision*

I believe students interviewed will initially describe their experiences positively and with less critical judgment towards their academic program, requirements therein, and site supervisory experiences. At first, I think students might be less comfortable admitting the degree of anxiety and/or difficulty laden in their experiences. However, I believe as time goes on and comfort level with the content of the interview and relationship with the interviewer strengthens, interviewees will reveal progressively higher levels of anxiety and more critical judgments about their general experience. As an end result, I believe that over time elevated levels of anxiety will be exposed amongst genetic counseling students. Additionally, I believe levels of discomfort and disapproval with site supervision in general will increase. I think students might also, after having undergone the interview and thus self-reflective process, divulge more explicit concern over how the program and their practicum experience are operated and overseen.

Researcher: Derek Meister
Date: 10/2/11

Appendix I: Moderate Anxiety Group Responses

Table 19

Domain and Category Frequency Labels for Interview Questions 1, 1a, and 1b

Domain/*Category*	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 1: Overall, how satisfied are you with the clinical experiences you have had in your program thus far?								
Highly Satisfied*	24	Typical	9	Typical	5	Variant	10	Typical
Moderately Satisfied*	15	Variant	3	Variant	7	Typical	5	Variant
Question 1a: What have been the most positive things about your clinical rotations?								
Supervision	22	Typical	8	Typical	7	Typical	7	Variant
Feedback	*18*	*Variant*	*7*	*Typical*	*6*	*Typical*	*5*	*Variant*
Support	*11*	*Variant*	*4*	*Variant*	*3*	*Variant*	*4*	*Variant*
Practical Experience & Skill Development*	18	Variant	5	Variant	4	Variant	9	Typical
Variety of Clinical Experiences*	13	Variant	4	Variant	2	Rare	7	Variant
Confidence & Comfort	10	Variant	3	Variant	4	Variant	3	Variant
Making a Difference*	2	Rare	0	--	0	--	2	Rare
Question 1b: What have been the most challenging things about your clinical rotations?								
Relational Factors	25	Typical	9	Typical	7	Typical	9	Typical
Challenging supervisor interactions*	*14*	*Variant*	*3*	*Variant*	*6*	*Typical*	*5*	*Variant*
Challenging patient interactions*	*9*	*Variant*	*5*	*Variant*	*1*	*Rare*	*3*	*Variant*
Making mistakes*	*3*	*Rare*	*0*	--	*2*	*Rare*	*1*	*Rare*
Translating information*	*3*	*Rare*	*2*	*Rare*	*0*	--	*1*	*Rare*
Giving bad news*	*3*	*Rare*	*2*	*Rare*	*0*	--	*1*	*Rare*
Personal Factors	23	Typical	7	Typical	7	Typical	9	Typical
Managing anxiety*	*14*	*Variant*	*2*	*Rare*	*5*	*Variant*	*7*	*Variant*
Building a knowledge base	*5*	*Variant*	*2*	*Rare*	*2*	*Rare*	*1*	*Rare*
Professional growth	*4*	*Variant*	*2*	*Rare*	*1*	*Rare*	*1*	*Rare*
Managing time*	*4*	*Variant*	*2*	*Rare*	*0*	--	*2*	*Rare*
External Factors	6	Variant	1	Rare	2	Rare	3	Variant

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Table 20

Domain and Category Frequency Labels for Interview Questions 3, 3a, and 3b

Domain/*Category*	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 3: Overall, how satisfied are you with the clinical supervision you have received?								
Moderately Satisfied	22	Typical	7	Typical	6	Typical	9	Typical
Highly Satisfied	16	Variant	4	Variant	6	Typical	6	Variant
Question 3a: What have been the most positive things about clinical supervision?								
Supervisor guidance and support	37	Typical	11	General	12	General	14	General
Advice/feedback	*22*	*Typical*	*7*	*Typical*	*8*	*Typical*	*7*	*Variant*
A source of comfort/ support*	*19*	*Variant*	*7*	*Typical*	*4*	*Variant*	*8*	*Typical*
A source of confidence/trust *	*8*	*Variant*	*3*	*Variant*	*1*	*Rare*	*4*	*Variant*
A second set of eyes	*6*	*Variant*	*1*	*Rare*	*3*	*Variant*	*2*	*Rare*
A source of challenge	*5*	*Variant*	*2*	*Rare*	*2*	*Rare*	*1*	*Rare*
Supervisee growth*	10	Variant	5	Variant	1	Rare	4	Variant
Professional growth*	*10*	*Variant*	*5*	*Variant*	*1*	*Rare*	*4*	*Variant*
Increased self-awareness*	*2*	*Rare*	*1*	*Rare*	*0*	--	*1*	*Rare*
Supervisor Characteristics	5	Variant	1	Rare	1	Rare	3	Variant
Question 3b: What have been the most challenging things about clinical supervision?								
Communication with Supervisor*	19	Variant	5	Variant	5	Variant	9	Typical
Lack of feedback*	*7*	*Variant*	*2*	*Rare*	*1*	*Rare*	*4*	*Variant*
Unclear expectations	*7*	*Variant*	*2*	*Rare*	*2*	*Rare*	*4*	*Variant*
Accepting constructive feedback	*5*	*Variant*	*1*	*Rare*	*2*	*Rare*	*2*	*Rare*
Lack of Control	16	Variant	5	Variant	6	Typical	5	Variant
Student status	*9*	*Variant*	*2*	*Rare*	*4*	*Variant*	*3*	*Variant*
Of the supervisor	*5*	*Variant*	*2*	*Rare*	*1*	*Rare*	*2*	*Rare*
Reality of logistics	*3*	*Rare*	*1*	*Rare*	*1*	*Rare*	*1*	*Rare*
Affective Experiences*	15	Variant	4	Variant	3	Variant	8	Typical
Stress/anxiety	*13*	*Variant*	*4*	*Variant*	*3*	*Variant*	*6*	*Variant*
Ambivalence*	*2*	*Rare*	*0*	--	*0*	--	*2*	*Rare*
Working with Multiple Supervisors	12	Variant	3	Variant	5	Variant	4	Variant
Managing multiple styles and expectations	*11*	*Variant*	*3*	*Variant*	*5*	*Variant*	*3*	*Variant*
Perceived supervisor	*4*	*Variant*	*0*	--	*1*	*Rare*	*3*	*Variant*

Domain/*Category*	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
credibility/ feedback validity*								

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Table 21

Domain and Category Frequency Labels for Interview Question 2: What Kind of Patients Have Been, or Do You Think Will Be, The Hardest for You To Work With? Why?

Domain	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Difficult Clinical Populations*	11	Variant	3	Variant	1	Rare	7	Variant
Disengaged Patients*	10	Variant	6	Variant	1	Rare	3	Variant
Resistant/Unreceptive Patients	10	Variant	2	Rare	4	Variant	4	Variant
Adapting to Patients' Knowledge Base	9	Variant	2	Rare	4	Variant	3	Variant
Unfamiliar with genetic lexicon	*6*	*Variant*	*2*	*Rare*	*2*	*Rare*	*2*	*Rare*
Highly educated*	*3*	*Variant*	*0*	--	*2*	*Rare*	*1*	*Rare*
Emotional Patients	7	Variant	1	Rare	3	Variant	3	Variant
Over-Identification*	2	Rare	1	Rare	1	Rare	0	--

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Table 22

Domain and Category Frequency Labels for Interview Questions 4 and 7

Domain	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 4: How would you describe a good supervisor?								
Supervisor behavior	37	Typical	12	General	10	General	15	General
Provide balanced feedback	*22*	*Typical*	*9*	*Typical*	*6*	*Typical*	*7*	*Variant*
Set clear/explicit expectations*	*13*	*Variant*	*2*	*Rare*	*7*	*Typical*	*4*	*Variant*
Balance support & challenge*	*11*	*Variant*	*4*	*Variant*	*1*	*Rare*	*6*	*Variant*
Provide room to grow	*9*	*Variant*	*2*	*Rare*	*3*	*Variant*	*4*	*Variant*
Give specific feedback*	*5*	*Variant*	*3*	*Variant*	*0*	--	*2*	*Rare*
Supervisor Characteristics	23	Typical	8	Typical	8	Typical	7	Variant
Available*	*13*	*Variant*	*4*	*Variant*	*6*	*Typical*	*3*	*Variant*
Supportive/ encouraging	*8*	*Variant*	*3*	*Variant*	*3*	*Variant*	*2*	*Rare*
Flexible/ open-minded*	*4*	*Variant*	*0*	--	*2*	*Rare*	*2*	*Rare*
Kind/caring/ compassionate*	*3*	*Rare*	*1*	*Rare*	*0*	--	*2*	*Rare*
Role Model*	*3*	*Rare*	*2*	*Rare*	*1*	*Rare*	*0*	--
Miscellaneous*	*3*	*Rare*	*2*	*Rare*	*0*	--	*1*	*Rare*
Question 7: What kind of supervisor has been the most difficult for you to work with? Why?								
Supervision Processes	23	Typical	8	Typical	6	Typical	9	Typical
Unbalanced feedback	*11*	*Variant*	*4*	*Variant*	*3*	*Variant*	*4*	*Variant*
Inconsistent/unclear expectations	*7*	*Variant*	*1*	*Rare*	*3*	*Variant*	*3*	*Variant*
Vague or missing feedback	*5*	*Variant*	*2*	*Rare*	*1*	*Rare*	*2*	*Rare*
Inappropriate supervision*	*3*	*Rare*	*2*	*Rare*	*0*	--	*1*	*Rare*
Supervisory Relationship*	16	Variant	3	Variant	5	Variant	8	Typical
Lacking comfort or connection*	*11*	*Variant*	*1*	*Rare*	*4*	*Variant*	*6*	*Variant*
Feeling held back*	*8*	*Variant*	*2*	*Rare*	*1*	*Rare*	*5*	*Variant*
Supervisor Inflexibility	7	Variant	3	Variant	1	Rare	3	Variant

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Table 23

Domain and Category Frequency Labels for Interview Questions 5a and 5b

Domain/*Category*	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 5a: What are the advantages of having your supervisor sit in on sessions with you?								
Safety Net	35	Typical	13	General	11	General	11	Typical
Information*	*26*	*Typical*	*11*	*Typical*	*8*	*Typical*	*7*	*Variant*
Guidance*	*12*	*Variant*	*2*	*Rare*	*5*	*Variant*	*5*	*Variant*
Confidence/comfort	*9*	*Variant*	*3*	*Variant*	*3*	*Variant*	*3*	*Variant*
Improves Training*	20	Typical	6	Variant	5	Variant	9	Typical
First-hand feedback & evaluations	*15*	*Variant*	*5*	*Variant*	*4*	*Typical*	*6*	*Variant*
Notice student blind spots*	*8*	*Variant*	*1*	*Rare*	*2*	*Rare*	*5*	*Variant*
Quality Assurance for Patients*	12	Variant	5	Variant	5	Variant	2	Rare
Question 5b: What have been the disadvantages of having your supervisor sit in on sessions with you?								
Internal Reactions	31	Typical	10	Typical	9	Typical	12	Typical
Stress/anxiety of being watched	*28*	*Typical*	*8*	*Typical*	*9*	*Typical*	*11*	*Typical*
Lack of independence*	*5*	*Variant*	*3*	*Variant*	*0*	--	*2*	*Rare*
Lack of confidence*	*3*	*Rare*	*2*	*Rare*	*1*	*Rare*	*0*	--
Session Dynamics	23	Typical	10	Typical	6	Typical	8	Typical
Difficulty establishing rapport*	*11*	*Variant*	*5*	*Variant*	*1*	*Rare*	*5*	*Typical*
Counsel for supervisor, not patient	*9*	*Variant*	*3*	*Variant*	*3*	*Variant*	*3*	*Variant*
Interruptions/taken over	*5*	*Variant*	*3*	*Variant*	*1*	*Rare*	*1*	*Rare*
Overly dependent on supervisor*	*4*	*Variant*	*3*	*Variant*	*1*	*Rare*	*0*	--
Overly Critical/ Nitpicking*	2	Rare	1	Rare	0	--	1	Rare

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Table 24

Domain and Category Frequency Labels for Interview Questions 6a and 6b

Domain/*Category*	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 6a: What have been the advantages of having multiple supervisors per rotation?								
See Multiple Styles*	33	Typical	12	General	9	Typical	12	Typical
Develop your own style	*24*	*Typical*	*9*	*Typical*	*6*	*Typical*	*9*	*Typical*
Counseling techniques*	*20*	*Typical*	*9*	*Typical*	*5*	*Variant*	*6*	*Variant*
Improved Training*	13	Variant	3	Variant	7	Typical	3	Variant
Strengths & specialties*	*12*	*Variant*	*3*	*Variant*	*6*	*Typical*	*3*	*Variant*
Balance	*4*	*Variant*	*1*	*Rare*	*2*	*Rare*	*1*	*Rare*
Feedback from Different Perspectives	12	Variant	5	Variant	3	Variant	4	Variant
Comfort*	3	Rare	1	Rare	0	--	2	Rare
Question 6b: What have been the disadvantages of having multiple supervisors per rotation?								
Supervisor Expectations	28	Typical	10	Typical	9	Typical	9	Typical
Supervisor Pleasing*	23	Typical	8	Typical	5	Variant	9	Typical
Modifying one's approach*	*22*	*Typical*	*8*	*Typical*	*5*	*Variant*	*9*	*Typical*
Impedes growth of own style*	*8*	*Variant*	*4*	*Variant*	*1*	*Rare*	*3*	*Variant*
Limits accurate evaluation	7	Variant	2	Rare	2	Rare	3	Variant
Logistics	5	Variant	2	Rare	2	Rare	1	Rare
Communication between Supervisors	4	Variant	1	Rare	1	Rare	2	Rare
Stress*	2	Rare	1	Rare	1	Rare	0	--
None*	2	Rare	0	--	1	Rare	1	Rare

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Table 25

Frequencies of Participant Descriptions of the Balance in Their Discussions with Supervisors between Their Personal Reactions to Sessions versus Patient Issues

Balance	Total	Low Anxiety Group	Moderate Anxiety Group	High Anxiety Group
Moderate to Patient	13	4	3	5
Moderate to Personal	12	4	5	3
Heavy to Patient	10	3	3	4
Equal	3	1	1	1
Heavy to Personal	2	1	0	1

Note. Moderate = 60-75% of the time; Heavy = > 80% of the time

Table 26

Domain and Category Frequency Labels for Interview Questions 8b and 8c

Domain	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 8b: On average, across all supervisors, what would be the ideal balance between your own reactions or impressions of sessions versus talking about clinical or patient-focused issues?								
50-50	14	Variant	5	Variant	5	Variant	4	Variant
Moderately Skewed to Patient*	12	Variant	6	Variant	2	Rare	4	Variant
Moderately Skewed to Personal*	7	Variant	1	Rare	2	Rare	4	Variant
Heavily Skewed to Patient*	5	Variant	0	--	2	Rare	3	Variant
Depends on Expertise/Specialty	4	Variant	2	Rare	1	Rare	1	Rare
Question 8c: On average, across all supervisors, how much have you talked with your supervisor about the relationship between the two of you?								
Rarely**	19	Variant	2	Rare	8	Typical	9	Typical
Never*	9	Variant	5	Variant	3	Variant	1	Rare
Not Necessary	9	Variant	2	Rare	4	Variant	3	Variant
Frequently*	6	Variant	2	Rare	0	--	4	Variant
Beginning & End	6	Variant	3	Variant	2	Rare	1	Rare
End Only*	4	Variant	1	Rare	0	--	3	Variant
Beginning Only*	3	Rare	2	Rare	1	Rare	0	--

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Table 27

Frequencies of Participant Descriptions of the Balance of Who Determines the Content Discussed in Supervision.

Balance	Total	Low Anxiety Group	Moderate Anxiety Group	High Anxiety Group
Equal	15	3	6	6
Heavy to Supervisor	9	4	3	2
Moderate to Supervisee	7	1	2	4
Moderate to Supervisor	6	2	1	3
Heavy to Supervisee	2	2	0	0

Note. Moderate = 60-75% of the time; Heavy = > 80% of the time

Table 28

Domain and Category Frequency Labels for Interview Question 9b

Domain	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 9b: On average, across all supervisors, what would be the ideal balance of how much of the content of supervision is decided by you versus decided by your supervisor?								
50-50*	22	Typical	6	Variant	7	Typical	9	Typical
Moderately Skewed to Supervisor*	13	Variant	4	Variant	3	Variant	6	Variant
Moderately Skewed to Supervisee*	4	Variant	2	Rare	2	Rare	0	--

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Table 29

Domain and Category Frequency Labels for Interview Questions 10a and 10b

Domain/*Category*	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 10a: What has been the most uncomfortable clinical issue for you to discuss in supervision?								
Actual	23	Typical	7	Typical	7	Typical	9	Typical
Constructive criticism*	*12*	*Variant*	*3*	*Variant*	*6*	*Typical*	*3*	*Variant*
Formal evaluations*	*3*	*Rare*	*1*	*Rare*	*0*	--	*2*	*Rare*
Emotionally charged situations*	*3*	*Rare*	*1*	*Rare*	*0*	--	*2*	*Rare*
Disagreeing with supervisors*	*3*	*Rare*	*1*	*Rare*	*0*	--	*2*	*Rare*
Miscellaneous	*3*	*Rare*	*1*	*Rare*	*1*	*Rare*	*1*	*Rare*
None	13	Variant	6	Variant	4	Variant	3	Variant
Hypothetical	8	Variant	2	Rare	3	Variant	3	Variant
Delicate/emotional conversation	*4*	*Variant*	*1*	*Rare*	*1*	*Rare*	*2*	*Rare*
Supervisor comments about patients*	*2*	*Rare*	*1*	*Rare*	*1*	*Rare*	*0*	--
Having to explain yourself*	*2*	*Rare*	*0*	--	*1*	*Rare*	*1*	*Rare*
Question 10b: What has been the most uncomfortable personal issue for you to discuss in supervision?								
Actual*	18	Variant	6	Variant	4	Variant	8	Typical
Boundaries	*12*	*Variant*	*4*	*Variant*	*3*	*Variant*	*5*	*Variant*
Supervisee feelings	*9*	*Variant*	*2*	*Rare*	*3*	*Variant*	*4*	*Variant*
Feedback regarding things which are difficult to change*	*2*	*Rare*	*0*	--	*1*	*Rare*	*1*	*Rare*
None	12	Variant	3	Variant	5	Variant	4	Variant
Hypothetical	9	Variant	4	Variant	2	Rare	3	Variant
Boundaries	*6*	*Variant*	*3*	*Variant*	*1*	*Rare*	*2*	*Rare*
Interpersonal dynamics	*4*	*Variant*	*2*	*Rare*	*1*	*Rare*	*1*	*Rare*

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Table 30

Domain and Category Frequency Labels for Interview Questions 11, 11a, 11b, and 11c

Domain	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 11: In general, do you consider yourself to be an anxious person?								
Yes*	21	Typical	3	Variant	7	Typical	11	Typical
No*	19	Variant	10	Typical	5	Variant	4	Variant
Question 11a: How has your level of anxiety improved your performance as a genetic counselor?								
Behavioral Effects	22	Typical	7	Typical	7	Typical	8	Typical
Increased case preparation*	*17*	*Variant*	*3*	*Variant*	*7*	*Typical*	*7*	*Variant*
Rolling with the punches*	*5*	*Variant*	*4*	*Variant*	*0*	--	*1*	*Rare*
Staying calm*	*10*	*Variant*	*6*	*Variant*	*0*	--	*4*	*Variant*
Motivation to improve*	*10*	*Variant*	*2*	*Rare*	*5*	*Variant*	*3*	*Variant*
Patient Benefits*	9	*Variant*	6	*Variant*	2	Rare	1	Rare
Quality of life*	3	Rare	2	Rare	0	--	1	Rare
Question 11b: How has your level of anxiety gotten in the way of your performance as a genetic counselor?								
Too Much Anxiety*	27	Typical	5	Variant	10	General	12	Typical
Feeling overwhelmed*	*8*	*Variant*	*1*	*Rare*	*2*	*Rare*	*5*	*Variant*
Self-consciousness*	*7*	*Variant*	*1*	*Rare*	*1*	*Rare*	*5*	*Variant*
Heightened stress*	*7*	*Variant*	*1*	*Rare*	*4*	*Variant*	*2*	*Rare*
Hinders building rapport with patients	*5*	*Variant*	*2*	*Rare*	*1*	*Rare*	*2*	*Rare*
Set impossible standards*	*3*	*Rare*	*1*	*Rare*	*0*	--	*2*	*Rare*
Can't plan for everything*	*2*	*Rare*	*1*	*Rare*	*1*	*Rare*	*0*	--
Pacing*	*2*	*Rare*	*0*	--	*2*	*Rare*	*0*	--
It Doesn't*	8	Variant	4	Variant	3	Variant	1	Rare
Too Little Anxiety*	7	Variant	4	Variant	1	Rare	2	Rare
Question 11c: How does your level of anxiety affected you during supervision?								
Detrimental to supervision*	20	Typical	3	Variant	8	Typical	9	Typical
Worry about perceptions of	*12*	*Variant*	*3*	*Variant*	*3*	*Variant*	*6*	*Variant*

Domain	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
the supervisor or evaluation								
Getting tongue-tied/ not speaking up*	*6*	*Variant*	*0*	--	*3*	*Variant*	*3*	*Varian t*
Other*	*3*	*Rare*	*0*	--	*2*	*Rare*	*1*	*Rare*
Little to No Impact*	18	Variant	8	Typical	5	Variant	5	Variant
Depends on the Supervisor*	5	Variant	0	--	1	Rare	4	Variant
Useful Anxiety	4	Variant	2	Rare	1	Rare	1	Rare

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups.

Category Definition

Question 11b, Domain 1: Too Much Anxiety, Category 7: Alters session pacing (Total n = 2; LA= 0; MA= 2; HA= 0). Two interviewees described differences in the pacing of their sessions, either in terms of speaking too fast or skipping over things. One of these participants self-identified as an anxious person and the other did not.

> *I know that some feedback I've gotten is that since I know all the information I kind of just want to like blurt it out, so I think that sometimes I move a little quickly just to sort of get it all out there because I'm nervous. When I'm nervous I tend to talk fast, so that's another sort of added layer to it.* (MA participant)

Table 31

Domain and Category Frequency Labels for Interview Questions 12a and 12b

Domain	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 12a: What strategies do you typically use to manage anxiety in your day-to-day life?								
Behavioral Strategies	27	Typical	10	Typical	9	Typical	8	Typical
Organization	*14*	*Variant*	*4*	*Variant*	*4*	*Variant*	*6*	*Variant*
Work/life balance*	*10*	*Variant*	*4*	*Variant*	*5*	*Variant*	*1*	*Rare*
Other*	*4*	*Variant*	*2*	*Rare*	*0*	--	*2*	*Rare*
Music*	*2*	*Rare*	*1*	*Rare*	*1*	*Rare*	*0*	--
Practice*	*2*	*Rare*	*1*	*Rare*	*0*	--	*1*	*Rare*
Physical Strategies	22	Typical	6	Variant	8	Typical	8	Typical
Exercise*	*17*	*Variant*	*3*	*Variant*	*6*	*Typical*	*8*	*Typical*
Meditation/yoga*	*6*	*Variant*	*0*	--	*3*	*Variant*	*3*	*Variant*
Sleep[a]*	*3*	*Rare*	*0*	--	*3*	*Variant*	*0*	--
Nutrition*	*2*	*Rare*	*0*	--	*0*	--	*2*	*Rare*
Social Support	15	Variant	5	Variant	5	Variant	5	Variant
Friends	*13*	*Variant*	*4*	*Variant*	*5*	*Variant*	*4*	*Variant*
Family	*6*	*Variant*	*3*	*Variant*	*2*	*Rare*	*1*	*Rare*
Romantic Partner*	*4*	*Variant*	*0*	--	*3*	*Variant*	*1*	*Rare*
Cognitive Strategies	10	Variant	3	Variant	3	Variant	4	Variant
Prayer/Faith*	3	Rare	2	Rare	1	Rare	0	--
Question 12b: How well do these strategies typically work for you?								
Pretty Effective	26	Typical	9	Typical	7	Typical	10	Typical
Highly Effective	8	Variant	3	Variant	3	Variant	2	Rare
Somewhat Effective	6	Variant	1	Rare	2	Rare	3	Variant

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups; [a] = category only present in the moderate anxiety group.

Category Definition

Question 12a, Domain 2: Physical Strategies, Category 3: Sleep (Total n = 3; LA= 0; MA= 3; HA= 0). Three students brought up the importance of getting adequate sleep. For example, "I try to have relatively healthy sleep habits…" (MA participant).

Table 32

Domain and Category Frequency Labels for Interview Questions 13a and 13b

Domain	Total		Low		Moderate		High	
	n	**Type**	***n***	**Type**	***n***	**Type**	***n***	**Type**
Question 13a: What strategies do you typically use to manage anxiety related to your clinical work?								
Same as Personal*	23	Typical	9	Typical	9	Typical	5	Variant
Behavioral Strategies*	19	Variant	4	Variant	7	Typical	8	Typical
Organization	*15*	*Variant*	*5*	*Variant*	*4*	*Variant*	*6*	*Variant*
Practice*	*4*	*Variant*	*1*	*Rare*	*0*	--	*3*	*Variant*
Work/life balance*	*3*	*Rare*	*0*	--	*2*	*Rare*	*1*	*Rare*
Physical Strategies*	13	Variant	3	Variant	6	Typical	4	Variant
Exercise*	*10*	*Variant*	*1*	*Rare*	*5*	*Variant*	*4*	*Variant*
Meditation/yoga	*5*	*Variant*	*2*	*Rare*	*1*	*Rare*	*2*	*Rare*
Sleep[a]*	*2*	*Rare*	*0*	--	*2*	*Rare*	*0*	--
Cognitive Strategies	12	Variant	5	Variant	4	Variant	3	Variant
Supervisor Support	9	Variant	2	Rare	3	Variant	4	Variant
Social Support	8	Variant	3	Variant	3	Variant	2	Rare
Other*	3	Rare	1	Rare	2	Rare	0	--
Prayer/Faith*	2	Rare	1	Rare	1	Rare	0	--
Question 13b: How well do these strategies typically work for you in this context?								
Equally Effective as Personal*	23	Typical	10	Typical	7	Typical	6	Variant
Less Effective than Personal	9	Variant	2	Rare	3	Variant	4	Variant
More Effective than Personal*	8	Variant	1	Rare	2	Rare	5	Variant

Note. General = All or all but 1-2; Typical = More than half; Variant = Less than half; Rare = Very few; *moderate likelihood of differences between anxiety groups; [a] = category only present in the moderate anxiety group.

Category Definition

Question 13a, Domain 3: Physical Strategies, Category 3: Sleep (Total n = 2; LA= 0; MA= 2; HA= 0). Two participants brought up the importance of getting enough

sleep. Both participants also used sleep management as a strategy in their personal lives. For example, "…remember to sleep…" (MA participant).