AN INTENSIVE SINGLE SUBJECT INVESTIGATION OF CLINICAL SUPERVISION: IN-PERSON AND DISTANCE FORMATS

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CHAPTER I

INTRODUCTION

Training competent clinical practitioners is an integral aspect of graduate programs in counseling psychology and counselor education. The training process begins for graduate students with coursework in basic communication skills, continues in practicum classes, and culminates during internship experiences. Despite the many elements in graduate study necessary for training competent clinical practitioners, clinical supervision is the principal method for preparing students for psychotherapeutic practice (Lambert & Ogles, 1997). Clinical supervision is considered to be not only a critical ingredient of training in counseling and psychology programs (Bernard & Goodyear, 1998) but also an important aspect of counseling practice (Borders, 1990).

Historically, clinical supervision has played a central role in the skill learning process. It is a fundamental requirement of accrediting organizations for graduate programs in professional counseling and psychology such as the American Psychological Association (APA) and the Council for the Accreditation of Counseling and Related Educational Programs (CACREP). Throughout the graduate training process, individual and group supervision of the trainee is an essential ingredient of his or her counseling skill development (Bernard & Goodyear, 1998; Stoltenberg, 1981; Loganbill, Hardy, &, Delworth 1982; Stoltenberg & Delworth, 1987).

Current trends in higher education have begun to impact counseling and psychology training. One trend is the expansion of distance learning in higher education. Major universities have satellite campuses that offer degrees to those in outlying areas willing to earn them. An even greater number of universities are offering degrees through distance education programs where all learning is facilitated via the computer and the Internet. Over 900 educational institutions in the United States offer full-degree programs employing combinations of Internet, satellite feeds, videoconferencing, cable television, and other tele-communications-based technologies (LaRose, Gregg, & Eastin, 1998).

In addition, technological trends in clinical service are beginning to influence the training of competent clinical practitioners. Specifically, interactive audiovisual videoconferencing at a distance is a growing medium through which clinical services are provided to a wide variety of clients. Clinical services are being provided via video teleconferencing include: assessment, diagnosis, intervention, consultation, and supervision. Clinical services incorporating distance technology can facilitate the problem of providing mental health services to historically underserved populations such as the geographically remote. For example, in the first six months of 1997, the Kentucky TeleCare Network telecommunications infrastructure helped serve 255 adult and child clients as the University of Kentucky Chandler Medical Center has offered regular weekly grand rounds and psychiatry telehealth clinics by means of videoconferencing (Burton, 1997). Additionally, distance training and supervision are currently taking place with the Veterans Affairs Cooperative Study Program No. 420 named Group Treatment of Post Traumatic Stress Disorder. In this program, four centrally located clinical supervisors provide supervision to 80 clinicians throughout the country via monthly

group teleconferences, weekly individual telephone supervision, and daily e-mail supervision (Stamm, 1998). Despite the proliferation of telecommunications advancements and incorporation in providing clinical services, questions arise within the mental health community about the quality of these assessment, counseling, and supervisory relationships at a distance.

One aspect of a study on therapists' subjective experiences with in-person and distance technology conducted by Day and Schneider (2000) found conflicting views. In this study, distance technology included videoconferencing and telephone services. Some therapists reported that their clients were more emotionally constrained using distance technology, while others stated that distance freed their clients to express difficult information and emotions more intensely than they would in person. Accounting for this apparent polarity in participants' views toward using technology is an important aspect of conducting research in this area. Given the differences in participants' approach to using technology, the developmental process of mental health counseling trainees using this medium of communication comes into question.

Stoltenberg and Delworth (1987), in their Integrated Developmental Model (IDM) of clinical supervision, describe the development of clinical trainees, including three levels of trainees, beginning, intermediate, and advanced. Stoltenberg and Delworth describe that at each of these levels, trainees begin with imitative, shallow, and rigid behaviors. These trainees then move toward more competence, self-assurance, and self-reliance as they progress in each level. The development of the trainee is facilitated by interpersonal relations with the supervisor whom, according to the IDM, is structured and directive with beginning trainees, and collegial and consultative with more advanced

trainees. The IDM has received empirical support through a number of research studies. Leach, Stoltenberg, McNeill, and Eichenfield (1997), McNeill, Stoltenberg, & Romans (1992), Bear & Kivlighan (1994), and Borders (1990) all found support of the IDM framework.

Given empirical support of this developmental model in clinical supervision, how will the medium of distance communication affect this interpersonal process? Holloway and Wampold (1983) explain that a chronic condition in the study of the supervisory relationship is the lack of attention to the reciprocal influence of both persons in the interaction. These researchers called for an interactional model to precisely describe the patterns of verbal behavior in supervision sessions. Accordingly, these authors began researching interpersonal interactions (Wampold, 1992; Holloway & Wolleat, 1994). One interesting aspect of this research concerns dominance in the supervisory relationship. Dominance can be determined in any dyadic relationship. If a trainee's behavior were statistically more predictive from a supervisor's behavior then the supervisor would be considered dominant with the evidenced behavior. There is empirical support of the supervisor being dominant in the clinical supervisory relationship (Wampold, 1992).

Benjamin (1974) developed and validated the Structural Analysis of Social Behavior (SASB) as a coding mechanism to measure interpersonal interactions. Pincus and Benjamin (1998) argue that the SASB provides an overarching paradigm, methodology, and theoretical framework that is applicable across clinical orientations and allows one to define and codify fundamental interpersonal dyadic relationships. There are opportunities for research incorporating this model in investigations of the developmental process of the supervisory relationship in clinical supervision.

The impact of videoconferencing on the interpersonal nature of the supervisor-trainee relationship remains to be investigated. Research incorporating measures of interpersonal interaction can produce results informing best practices in this training process. The lack of research in distance mental health training leaves one uncertainties about the usefulness of this medium of interpersonal interaction.

Statement of the Problem

Higher education institutions have invested greatly in technological equipment to provide distance education programming. Lewis, Snow, Farris, and Lewin (1999), in a research study entitled "Distance Education at Post-Secondary Institutions 1997-1998" revealed 34 percent of higher education institutions in the United States offered distance education courses and another 20 percent planned to offer such courses in the near future. An estimated 1,661,100 students were formally enrolled in distance education courses in the academic year 1997-1998. The expansion of this mode of education delivery is also evident in the field of psychology where the Fielding Institute offers a distance APA accredited doctoral program in clinical psychology (The Fielding Institute, 2000). In addition, the regionally accredited Capella University provides an on-line master's degree in professional counseling as well as a doctoral degree in clinical psychology (Capella University, 1999). The growth of distance education and training has been swift, yet in the recent past university administrators and distance educators struggled to defend the credibility of distance education (Pittman, 1991). However, more recent research by Russell (1996), who searched the literature on technology in the classroom, found 231

studies conducted from 1949 to 1996 all revealing no significant difference between traditional classroom and technologically mediated learning.

Concerns about the provision of treatment and training services via video conferencing include lack of clinical and technological standards. Since 1996, the APA Board of Professional Affairs (BPA) has held discussions on such topics as telecommunications for therapy, professional relationships, informed consent, electronic medical records and their security, e-mail, and electronic claims submissions (Foxhall, 2000). The ethics committees of several mental health organizations, including the American Psychological Association (1998), American Counseling Association (1997), National Board of Certified Counselors (1998), and the International Society for Mental Health Online (1999) have formulated statements concerning telehealth, addressing issues such as security of communication, procedures for contact offline, and provision for technology failure. It is interesting that while various national and international professional associations are addressing telehealth and counseling at a distance, they have not addressed distance clinical supervision even though there is evidence of this type of training occurring. The question remains, can clinical supervision be provided effectively through a medium such as teleconferencing?

Many important decisions about using distance technology in the health industry have already been made, without the benefit of empirical research (Day & Schneider, 2000). Group and individual supervision is an integral aspect of all programs in counselor training. Mental health professionals and educators must determine how distance supervision is to be conducted within counseling psychology, counselor education

programs, and internship sites. Empirical research can assist in determining the place of distance supervision in clinical training.

Clinical supervision using videoconferencing technology is a new and unexplored domain. Current research on trainee development and appropriate training models may be impacted by this distance relationship. There are a number of studies suggesting developmental stages trainees move through in skill building to become competent practitioners (Stoltenberg, 1981; Loganbill et al., 1982; Stoltenberg & Delworth, 1987). These previous research findings, demonstrating a developmental process, may be of little value to this new medium of exchange given that most of the research testing these theories was conducted with traditional in-person meetings between the supervisor and trainee. Past findings need to be reassessed in light of differences in this mode of training.

This study will address supervisor and trainee interpersonal behaviors as the supervisory relationship develops and is maintained over a semester. Differences in the interpersonal interaction of supervisory dyads meeting in person and through video teleconference will be investigated. The experience of clinical supervision as reported by the supervisor and trainees meeting in person and at a distance will be examined through structured interviews.

Rationale and Significance of the Study

Given that an ever increasing amount of course content and instruction in higher education is moving to a distance format, the clinical supervision component of counseling psychology and counselor education programs will have more opportunities to

follow suit. Some public and private agencies in mental health have already incorporated a distance format in their training of psychologists and other mental health professionals, providing evidence that a transition from an in-person format to a distance format is occurring (Freddolino & Han, 1999; Murphy, Drabier, & Epps, 1998; Christie, 1999; Burton, 1997; Stamm, 1998). Few research studies have been conducted examining the viability, outcomes, and effectiveness of this medium of supervision as well as the impact on the development of the trainee.

The limited research concerning mental health and videoconferencing can be attributed in part to the rapid development of technological advances. Universities and mental health agencies have only just begun to acquire high speed Internet access to support programs allowing for clear and uninterrupted videoconferencing. Technological advancements are often occurring well before any standards for their use are developed. Research on distance interpersonal relationships is necessary now that this equipment is available and being incorporated into higher education, public, and private industry as a conferencing and training medium. One example of how this type of research can inform best practices in the training of mental health professionals is by answering funding questions. Hypothetically, if a university had a large budget for educating mental health students in rural areas, the administration and faculty may wonder if the money should go toward setting up distance technology for supervising their clinicians in training, or channeling the funds toward faculty transportation costs to provide this aspect of training. Questions like this and others regarding the use of such technology in clinical supervision training can be addressed with the design of appropriate research.

Currently, there are two studies utilizing the same sample in the published literature that investigate clinical supervision using video conferencing technology. Gammon, Sorlie, Bergvik, and Hoifodt (1998) conducted a qualitative study of user's experiences involved with videoconferencing psychotherapy supervision. The researchers concluded that the quality of psychotherapy supervision can be satisfactorily maintained by using videoconferencing provided the dyad in question has met in person and established a relationship characterized by mutual trust and respect. Sorlie, Gammon, Bergvik, and Sexton (1999) report a quantitative investigation of self-report data concerning the quality of communication, the alliance and negative events in the supervision sessions. Independent ratings of the videotaped sessions were also conducted. The only significant difference between the two conditions was that trainees, who were in a more vulnerable position, scored higher on negative events under videoconference conditions while the supervisors did not experience any significant differences between the two conditions.

Outside the published literature, this principal investigator completed a qualitative research project investigating the impact of videoconferencing technology on supervisors and trainees involved in a clinical supervision relationship. The participants were two advanced doctoral student supervisors and two masters student trainees. The two dyads participated in a semester long clinical supervision relationship by way of videoconference. The data were obtained through observations of supervision sessions and interviews with the participants. The salient findings of this research project included an adaptation to the technology. Initially, the participants reported on the difficulty in noticing subtle body language such as facial expressions. Participants also spoke to a

sense of distance in not having the other person in the room with them and how this contributed to lack of warmth in the relationship. As the semester progressed and the participants utilized the technology for over ten weeks these initial thoughts and feelings changed. The participants spoke to the establishment of a sense of connection to the other as similar to meeting with someone in person. This sense of the other took some weeks to establish and unease with the technology had to be overcome during the semester. The principal researcher chose to frame this process as an adaptation to the technology that takes place over time with experience in using the equipment.

Given the research findings as presented above, videoconferencing in clinical supervision is a largely unexplored domain in the published literature. Previous research findings about the interpersonal relationship and trainee development may be impacted by this emerging format of supervision and therefore need reassessment in light of differences in this mode of training. This study will address questions related to the application of distance methods to clinical supervision. Specifically, how does a videoconferencing format affect the developmental process of counselor trainees that has received empirical support in the field of clinical supervision? Additionally, are there different patterns of interpersonal communication between in-person and distance relationships in clinical supervision?

Definition of Terms

The following terms will be discussed throughout the research study. Information concerning the meaning of the words as they are used in different contexts of this

research is provided. The terms have been grouped by the specific contexts in which they are used.

Terms Concerning Interpersonal Interactions

Circumplex – representing the reciprocal influence nature of interpersonal relationships.

Complementarity – reciprocity on the interdependence (control) dimension and correspondence on the affiliative dimension.

Intransitive – Expressing an action or state that is limited to the agent or subject.

Introjected – incorporated unconsciously into ones own psyche.

Transitive – Expressing an action carried from the subject to the object; requiring a direct object to complete meaning.

Terms Concerning Technology

Asynchronous – Posting documents on a web page for others to review at their leisure; web communication that does not occur in real time.

E-mail – the receipt and sending of electronic messages over the Internet.

Internet – a worldwide network of computers that enables network members to communicate with each other and to access electronic information resources by computer. The internet is also known as the Net, Web, or Cyberspace.

LAN – local area network. A system that links together electronic equipment, such as computers and word processors, and forms a network within the university and across campuses.

TeamStation – a videoconferencing system enabling the supervisor and trainee to see and hear each other while meeting for their supervision session.

Videoconference – the use of computer and video monitoring systems for the purpose of transmitting information across the Internet. This allows two people in different physical locations to see and hear each other in real time.

Threaded discussion – a series of asynchronous messages posted in succession and related to some the topic of discussion for the supervision class.

Terms Concerning Clinical Supervision

Distance Clinical Supervision – The specific application of videoconferencing technology to clinical supervision allowing the supervisor and trainee to see and hear each other while physically being in two different cities.

In-Person Clinical Supervision – A traditional in person meeting between the supervisor and trainee for the purpose of clinical supervision.

Terms Concerning Sequential Analysis

Transition – This represents a change in speaking turn from the trainee to supervisor or vice versa.

Parallel Dominance – This involves asymmetry in predictability of behaviors i to j and j to i. The parallel case demonstrates that "i increased the probability of j and j increases the probability of i or i decreases the probability of j and j decreases the probability of i" (Wampold, 1992, p. 102).

Research Questions

Questions of relevance to this study include:

1. Do supervisor and trainee behaviors follow the pattern set forth by the Integrated Developmental Model (IDM) in both the in-person and distance conditions?
    a. Do trainee behaviors reflect dependence more than autonomy in early supervision sessions?
    b. Do trainee behaviors reflect autonomy more than dependence in late supervision sessions?
    c. Do trainees become less dependent on the supervisor over time?
    d. Do trainees become more autonomous over time?
    e. Do supervisors behave more directive and structured than collegially and consultative in early supervision sessions?
    f. Do supervisors behave more collegially and consultative than directive and structured in later supervision sessions?
    g. Do supervisors' directive and structured behaviors decrease over time?
    h. Do supervisors' collegial and consultative behaviors increase over time?

i. Are there differences in trainees' behaviors across in-person and distance conditions of supervision?

j. Are there differences in supervisor behaviors across in-person and distance conditions of supervision?

2. Will trainee behaviors be predictable from supervisor behaviors more than conversely in both the in-person and distance mediums of communication?
3. Is clinical supervision experienced and interpreted differently depending on medium of communication from the perspectives of the supervisor and trainee; specifically do the distance participants' evidence adaptation to the technology?

Research Hypotheses

1. It is hypothesized that supervisor and trainee behaviors will follow the same pattern set forth by the Integrated Developmental Model (IDM, Stoltenberg & Delworth, 1987) in both the in-person and distance conditions.
    a. Trainees in both in-person and distance conditions will demonstrate more dependent than autonomous behaviors in early supervision sessions.
    b. Trainees in both in-person and distance conditions will demonstrate more autonomous than dependent behaviors in late supervision sessions.
    c. Trainees in both in-person and distance conditions will become less dependent over time.
    d. Trainees in both in-person and distance conditions will become more autonomous over time.

e. In both in-person and distance conditions, supervisors behaviors will be more directive than collegial in early supervision sessions.
f. In both in-person and distance conditions, supervisors behaviors will be more collegial than directive in late supervision sessions.
g. In both in-person and distance conditions, supervisors directive behaviors will decrease over time.
h. In both in-person and distance conditions, supervisors collegial behaviors will increase over time.
i. Trainee behaviors will not differ between in-person and distance conditions.
j. Supervisor behaviors will not differ between in-person and distance conditions.

2. It is hypothesized that the supervisor will evidence dominance in both supervision dyads.
    a. In the distance condition, supervisor behaviors will be more predictive of the trainees' behaviors rather than conversely.
    b. In the in-person condition, supervisor behaviors will be more predictive of the trainees' behaviors rather than conversely.
3. Based on the researcher's prior qualitative study on distance supervision, it is expected that the supervisor and trainee involved in the distance format will experience a process of adaptation in accounting for the physical absence of the other.

Assumptions

1. The assumption is made that in-person clinical supervision is the "gold standard" in providing clinical training.

CHAPTER II

REVIEW OF LITERATURE

The literature review is comprised of topic areas important to the foundation of this research. This chapter is sectioned by the following headings:

- Effectiveness of Counselor Supervision
- Technology in Counselor Supervision
- Developmental Models of Clinical Supervision
- Empirical Research Supporting the Integrated Developmental Model
- Interpersonal Influence Theory
- Empirical Research Supporting the Structural Analysis of Social Behavior
- Sequential Analysis
- Empirical Research in Clinical Supervision Utilizing Sequential Analysis

Effectiveness of Counselor Supervision

Clinical supervision is an integral part of the process by which competent mental health professionals are trained. Bernard & Goodyear (1998) defined clinical supervision as:

> an intervention provided by a senior member of the profession that is evaluative, extends over time, and has the simultaneous purposes of enhancing the professional functioning of trainees, monitoring the quality of professional services offered to the clients and serving as a gatekeeper for the profession. (p. 6)

The word "supervise" means literally "to over-see" (Webster, 1993). Thus, a supervisor is one who oversees the work of another with responsibility for the quality of that work. Clinical supervision historically has been closely linked to the assumptions and theoretical bases of counseling and psychotherapy practice.

Many disciplines within the field of mental health such as psychology, counseling, and social work have required clinical supervision in the training of competent clinical practitioners. Historically, each of these disciplines has used psychotherapy theories which largely informed clinical work with client populations, and adapted them to the practice of clinical supervision. The differing psychological theories (e.g., psychodynamic, person-centered, cognitive-behavioral) have served as a foundation and direction for supervisors to draw from in their work with trainees (Bernard & Goodyear, 1998).

Notwithstanding the disagreement in theories of psychotherapy, as well as their goals and varied training practices, supervision remains the one component considered vital to all (Lambert & Ogles, 1997). Many theories pertaining to trainees in clinical supervision exist (see Bernard & Goodyear, 1998), although few have been explicitly tested (Ellis & Ladany, 1997). Lambert & Ogles (1997) state:

> Although literature on the effectiveness of psychotherapy might tempt one to embrace the inference that graduate training in psychotherapy is crucial, it must be recognized that researchers have yet to conduct sufficient outcome studies that adequately explore the relationship between specific aspects of training programs (e.g., therapy courses, supervision) and therapy outcomes. (P. 441)

Despite the limited number of research studies investigating client outcomes and their link to clinical supervision, some evidence can be found linking these two variables (Burlingame, Fuhriman, Paul, & Ogles, 1989; Stein & Lambert, 1995; Bein, Anderson, Strupp, Henry, Schacht, Binder, Butler, 2000).

The impact of clinical supervision on client outcome is considered by many to be the determining factor in the efficacy of supervision (Holloway & Hosford, 1983; Holloway & Neufeldt, 1995; Stein & Lambert, 1995). Burlingame et al., (1989) assessed the relationship between level of clinical experience, training format (no training, self-instructional, or intensive training), and therapeutic outcome in time-limited therapy. The researchers found clients of experienced therapists had consistently superior outcomes when compared with clients of their less experienced counterparts. Additionally, they concluded the more intensely trained therapists realized better outcome, irrespective of therapist experience.

Stein and Lambert (1995), in their meta-analytic review examining relationships between therapist experience and training with therapy outcome, concluded that a variety of outcome sources are associated with modest effect sizes favoring more trained therapists. Additionally, the researchers found that in many outpatient settings, therapists

with more training tended to suffer fewer therapy dropouts than less trained therapists. Bein et al. (2000) explored the effects on therapeutic outcomes of training already experienced psychologists and psychiatrists in brief manualized therapy. The researchers concluded that one year of training in Time-Limited Dynamic Psychotherapy resulted in improved client outcomes generally. In conclusion, supervision has been shown to improve client outcomes with moderate effect sizes favoring more intensely trained therapists (Burlingame et al., 1989; Stein & Lambert, 1995; Bein et al., 2000).

Technology in Clinical Supervision

A historical perspective of the use of technology in supervision may shed light on the current advances in this practice. One of the first technological advances incorporated into clinical supervision was videotape recording of therapist/client sessions. Bernard and Goodyear (1998) list Kagan's Interpersonal Process Recall (IPR) as playing a important part in popularizing the use of video in clinical supervision. IPR allowed supervisors to view the counseling process of the trainee and use this technology as a teaching tool. The technological advance of Kagan's IPR continues to be a part of clinical training today (Bernard & Goodyear, 1998).

In the 1990s authors of published position articles began to address the internet as a possible teaching tool in clinical supervision (Casey, Bloom, & Moan, 1994, Hermansson, 1998, Myrick & Sabella, 1995, Sampson Jr. & Kromboltz, 1991). Although these articles were not empirical studies, the expressed opinions called for an increase in the use of computer assisted instruction and supervision in mental health training. These

authors focused heavily on the potential use of e-mail in the supervisory relationship as this was a relatively new and emerging technological advancement.

In 1999, Janoff and Schoenholtz-Read published a model for supervision of group psychotherapy with a combination of in-person and distance training conditions. This model consisted of two groups of five counselor trainees meeting in person with a highly experienced certified group psychotherapist. Seventy-five hours of supervision were provided over two years. The format included eight meetings a year for seven hours each. The meetings were scheduled about six weeks apart. Between the in-person meetings, the group was required to participate in a threaded, asynchronous discussion on-line with their classmates and a supervisor. Weekly deadlines are in place for postings of clinical cases or dilemma, an applied theory question, or professional, ethical, or legal question.

A qualitative study conducted by Christie (1999) investigated distance supervision via text-based e-mail communication. Christie was the primary supervisor for four students enrolled in a special distance-class section of practicum for one semester. The students presented clients by means of weekly e-mail and received feedback from Christie in the same manner. The group of students and Christie met weekly by use of a chat format on the Internet. Christie's findings suggest that attitudes, prior experiences, and social expectations influence participant experiences and participants' interest in technology. In addition, Christie described participants' interest in technology, and the convenience of the distance venue as providing an impetus toward autonomous functioning in spite of trainee dependency.

The ability to communicate at a distance is an advantage of using e-mail in the supervisory relationship. One limitation of this form of supervision is the absence of

nonverbal communication such as gestures, facial expressions, or tone of voice. Ethical concerns have also been raised about the limits of confidentiality in using e-mail communication in supervision (Sampson, Kolodinsky, & Greeno, 1997). With the advancement of technology in video communication through high-speed Internet connections, a new form of distance supervision is emerging.

Recently conducted studies have incorporated computer video-assisted clinical supervision (Gammon, Sorlie, Bergvik, & Hoifodt, 1998; Sorlie, Deede, Bergvik, & Sexton, 1999, Stamm, 1998). Gammon et al., (1998) conducted a qualitative study of users' experiences involved with videoconferencing psychotherapy supervision. Six supervision dyads participated in the study to evaluate the quality of the psychotherapy supervision process when supervisors and trainees communicated by means of interactive audiovisual videoconferencing. Each supervision dyad participated in 10 supervision sessions with five videoconference-based and five in-person, alternating every other session weekly. Interviews were conducted with participants at the completion of the supervision sessions.

The researchers concluded that the quality of psychotherapy supervision can be satisfactorily maintained by using videoconferencing (384 kbps) for up to 50% of the required psychotherapy supervision. The prerequisite for this estimate is that the dyad in question has met in person and established a relationship characterized by mutual trust and respect. The authors further suggested that the limitations imposed by videoconferencing may, paradoxically enough, stimulate the development of insights and communication abilities that contribute positively to the quality of psychotherapy supervision, also found in an in-person setting. The researchers concluded with the most

obvious implications of the study being the potentials provided by this technology for implementing decentralized models for training mental health professionals.

Sorlie et al., (1999) reported a quantitative investigation of the same participants as in the Gammon et al., (1998) study reported above. Self-report data of the quality of communication, the alliance and disturbing elements in the supervision sessions were collected from specially designed questionnaires completed after each session. Independent ratings of the videotaped sessions were also conducted. The only significant difference between the two conditions was that trainees, who were in a more vulnerable position, scored higher on negative events under videoconference conditions while the supervisors did not experience any significant differences between the two conditions. The research team recommended when videoconferencing is used for supervision, supervisors should invite reflections upon any reactions to the technology that may occur.

Similar to the text-based e-mail form of distance supervision (Christie, 1999), concerns have been raised about the confidentiality of videoconferencing. However, contrary to e-mail or text formats, videoconferenced information is not stored or copied. Additionally, if someone were to break into a point-to-point (i.e., supervisor-to-trainee) video conference session, communication would end immediately and the person breaking in would become one of the endpoints to the communication. Therefore, the communication between the supervisor and trainee would end instantaneously. This would seem to provide the utmost secure transmission of client information across the Internet that we know of to date.

This new form of supervision has emerged out of advances in telehealth in the 1990s. In the early 1990s the public grew interested in the Internet, and the federal

government responded by developing a plan for a national computing and telecommunications network (Nickelson, 1998). At the same time, the national health care reform debate began, and the legislative solutions to the steady increase in national health care spending began to appear, which included telecommunication within the healthcare system. Rural advocates were beginning to experiment with telehealth as a way to overcome the problem of the geographic distribution of health care specialists (Nickelson, 1998). The idea that this type of service delivery could cut costs in the healthcare system encouraged the discussion and proposals of national rural telehealth projects. The federal government has begun supporting research in the use of this type of technology in mental health services being provided by the Bureau of Prisons and in training of psychologists through the Department of Veterans Affairs (Magaletta, Fagan, & Ax, 1998; Stamm, 1998). Countries other than the United States are already seeing the benefits of incorporating video conferencing in psychotherapy supervision. A shortage in qualified psychotherapy supervisors in rural Norway motivated a study evaluating the quality of the supervision process when supervisors and trainees communicated by interactive audiovisual videoconferencing (Sorli et al., 1999).

The use of video teleconferencing in training and service delivery of psychologists is on the rise throughout the world. To ensure appropriate development of video teleconferencing applications, psychologists must have a clear understanding of the opportunities and a strategy framework in place to manage the challenges it will provide professional training and practice. Educators and mental health professionals are just beginning to study the applications of video teleconferencing in training competent practitioners. Research addressing the development of relationships in clinical

supervision via videoconferencing over the internet will help in clarifying developmental issues (Sampson, Kolodinsky, & Greeno, 1997).

Developmental Models of Clinical Supervision

Prior investigations of the clinical supervision process and theory have focused on several issues. These include the nature of trainee growth and development, as well as the conceptual and skill process associated with advanced trainee learning (Blocher, 1983; Loganbill, et al., 1982; Stoltenberg, 1981; Stoltenberg & Delworth, 1987) and the influence of the supervisory relationship on trainee change and growth in the profession (Ladany, Ellis, & Friedlander, 1999; Sumerel & Borders, 1996; Worthington, 1987). In recognizing these multiple areas of investigation, no aspect of supervision has been so heavily researched as the developmental approach. The principal of trainees progressing through a developmental sequence as they gain supervised clinical experience has a long-standing tradition in the clinical supervision literature (Worthington, 1987; Holloway, 1987; Russell, Crimmings, & Lent, 1984). Holloway (1987 p. 209) claimed, "Developmental models of supervision have become the Zeitgeist of supervision thought"

Four developmental models of supervision (Blocher, 1983; Loganbill et al., 1982; Stoltenberg, 1981; Stoltenberg & Delworth, 1987) have linked their origins to psychosocial developmental theory. Underlying all of these developmental models of supervision is the notion that trainees are continuously growing, in fits and starts, in growth spurts and patterns. In combining their experience and hereditary predispositions

they develop strengths and growth areas. The object is to maximize and identify growth needed for the future. Thus, it is typical to be continuously identifying new areas of growth in a life-long learning process. Worthington (1987) reviewed developmental supervision models and noted some patterns, including the behavior of supervisors changing as trainees gain experience, and the supervisory relationship also changing. A number of researchers have provided a scientific basis for developmental trends and patterns in supervision (Bear & Kivlighan, 1994; Borders, 1990; Chagnon & Russell, 1995; Ellis & Dell, 1986; Heppner & Roehlke, 1984; Krause & Allen, 1988; Leach, Stoltenberg, McNeill, & Eichenfield, 1997; Wiley & Ray, 1986).

The developmental model of clinical supervision developed by Blocher (1983) delineated process goals of supervision and developmental learning environments. Within the process goals of supervision the author identified relationship and communication conditions. Relationship conditions included mutual trust and respect from the supervisor. This supervisor behavior was identified to encourage growth assuming that the trainee enters the supervisory relationship as feeling inadequate and vulnerable in their counseling skills. Communication conditions were characterized by an atmosphere in which the supervisor and trainee would be able to express themselves freely and honestly.

Blocher (1983) put forth seven developmental learning environments in this model. The challenge environment was defined as "the degree of mismatch that exists between the existing coping resources of the learner (trainee) and the immediate demands of the environment" (p. 31). This level assumes that the trainee enters the supervisory relationship with limited knowledge of therapeutic skills. The involvement environment included the amount of input the trainee contributes to self learning in the process of

clinical supervision. The support level was characterized by warm and empathic caring for the process of the supervisory relationship. The structure environment included the supervisor providing a clear learning strategy for the trainee. The feedback environment included the supervisor providing immediate and honest feedback regarding trainee performance. The innovation environment involved the trainee using new behaviors related to their therapeutic skill building. The integration environment was the last environment included in the model and consisted of a stable pattern of interaction between the trainee and supervisory relationship. This model lacks a clear developmental process defined by trainee and supervisor specific behaviors. Therefore, this model was not selected for inclusion in the current study.

The developmental model of clinical supervision developed by Loganbill et al. (1981) was a three stage model. These stages included Stagnation, Confusion, and Integration. The beginning stage, Stagnation, is characterized by trainee naiveté. This unawareness of issues central to the process of supervision characterized how beginning trainees entered the supervisory relationship. This level accounted for more experienced trainees as well, and described them as stuck or stagnant. The second stage of the model was characterized by a definite shift that the authors described as occurring abruptly or gradually. Regardless of the timing, this stage included trainee instability, disorganization, disruption, confusion, and conflict. At this stage the trainee sought equilibrium from the described characteristics. The final stage in this model is described by the authors as a welcomed shift. This stage was characterized by reorganization, integration, flexibility, and entailed the trainee gaining new cognitive understanding. This understanding included an ongoing awareness of the issues central to clinical supervision.

Throughout the stages of trainee development, critical issues in the supervisory relationship were described as competence, awareness, autonomy, identity, respect of individual differences, purpose and direction, motivation, and professional ethics. This model was more specific in stages of development than the Blocher (1983) model yet lacked clear behavioral definitions of the trainee and supervisor during the developmental process. Therefore, this model was not selected for inclusion in the current study.

Stoltenberg (1981) developed the Counselor Complexity model of development which consisted of four levels. Each level included trainee characteristics and corresponding optimal supervisory environments. Level 1 was described as trainee dependence on the supervisor. Characteristics of this level included trainee imitative behavior and a lack of self and other awareness. The trainee possessed knowledge of counseling theory yet had minimal psychotherapy experience. The optimal environment at this level was described as the supervisor instructing, interpreting, awareness training, and providing structure. Level 2 trainee characteristics included a dependency-autonomy conflict in which the trainee had increasing self and other awareness, a striving for independence, and became less imitative in his/her behavior. The optimal environment for this trainee was described as supervisor support and clarifying ambivalence with less structure than provided in Level 1. Level 3 entitled Conditional Dependency included the trainee gaining his/her personal identity as a counselor in addition to increased insight, consistent motivation, and increased empathy. The optimal supervisory environment at this level was described as autonomous with structure being provided by the trainee and the supervisor interaction being collegial. Level 4 was entitled Master Counselor and was characterized by adequate self and other awareness, a willful interdependence with

others, and an integration of standards within the profession. The optimal environment for this trainee called for the supervisor to interact on a collegial level if supervision continued at all. This model had specific trainee and supervisor behaviors that could be tested yet the author updated the theory including other researchers thereby forming the IDM. For this reason this model was not selected for inclusion in the current study.

The most recent developmental model created by Stoltenberg, McNeill, and Delworth (1998) will be the focus of this investigation. Their Integrated Developmental Model (IDM) includes three levels of trainees: beginning (Level 1), intermediate (Level 2), and advanced (Level 3). Within each level, the authors noted that trainees tend to begin in a rigid, shallow, imitative way and move toward more competence, self-assurance, and self-reliance. The authors acknowledge that clinical practice and empirical research suggest the level designation is too simplistic. However, they state "It is not useful to categorize a trainee this broadly, although a general 'level' designation may prove efficient in considering the degree of expertise and capacity for assuming responsibilities within a particular context" (p. 15). Within the IDM, particular attention is paid to three overriding structures that can provide representative indicators when evaluating professional growth: Self-and-Other Awareness, Motivation, and Autonomy across each level.

Typical development of Level 1 trainees would find them relatively dependent on the supervisor to diagnose/understand/explain client behaviors and attitudes as well as establish plans for intervention. In the Self-and-Other Awareness domain, the Level 1 trainee's focus is mainly on self; the trainee is not particularly insightful and is very concerned about performance. In the Motivation domain, the Level 1 trainee

demonstrates a high desire to learn skills, is enthusiastic, and wants to meet an ideal but is uncertain of how to carry this out. In the Autonomy domain, the Level 1 trainee is dependent on the supervisor and lacking in confidence. Additionally, the trainee demonstrates a need to be advised, guided, reassured, and given positive feedback.

Stoltenberg and Delworth (1987), in an earlier article explaining the IDM, include the appropriate supervisor behaviors for interacting with Level 1 trainees; providing a clearly structured environment, giving positive support and encouragement without allowing over-dependency, and stretching trainees without overloading them. Stoltenberg, NcNeill, and Delworth (1998) explain that "if training experience has been structured in such a way to allow the therapist to achieve success in early attempts at intervention, he or she may develop sufficient, although unjustified, confidence and desire more autonomous functioning" (p. 39). This statement allows for the expression of increasing autonomy and confidence among trainees within specific training experiences.

Level 2 trainees depend on supervisors for an understanding of difficult clients, but would be bothered at suggestions about others viewed as less difficult (Stoltenberg, McNeill, & Delworth, 1998). Resistance, avoidance, or conflict is typical at this stage because trainee self-concept is easily threatened. In the Self-and-Other Awareness domain, the Level 2 trainees focus on the client's needs and at the same time they may get overwhelmed by the client and deny their own needs and limits. The Level 2 trainee fluctuates between overconfidence and not knowing enough. In the Motivation domain, the Level 2 trainee demonstrates disillusionment by thinking that the work is more difficult than initially thought, and/or experience ambivalence with regard to motivation in working with clients.

In the Autonomy domain, the Level 2 trainee demonstrates a dependency/autonomy conflict phase. This is characterized as needing others, not wanting to admit this, and reluctance to ask for what they need. Also in this phase, the trainee will use others, such as the supervisor, as a model. Stoltenberg and Delworth (1987) recommend the supervisor be less structured and not as guiding as with the Level 1 trainee, and that the supervisor keep very consistent and clear boundaries to support the ambivalence and uncertainty. Supervisors are encouraged to be more challenging to develop ability and self awareness, but clearly affirm change and growth in order to build confidence in the Level 2 trainee.

Level 3 trainees function independently, seek consultation when appropriate, and feel responsible for their correct and incorrect decisions (Stoltenberg, McNeill, & Delworth, 1998). In the Self-and-Other Awareness domain, Level 3 trainees are able to see clearly their own and client needs, know their strengths and limits, and are comfortable not knowing all of the answers for their clients. In the Motivation domain, Level 3 trainees are self-directed and consistent, know where they are going, challenge themselves, and continue to want to learn. In the Autonomy domain, Level 3 trainees are self-confident but also consult and ask for advice. They demonstrate the ability to integrate their knowledge with their practice, evaluate others' advice, and challenge others. Stoltenberg and Delworth (1987) recommend that supervisors share of themselves while allowing greater trainee autonomy. Supervisors should avoid complacency and over familiarity while facilitating trainee challenges. This is the time for supervisors to act collegial with the trainee.

The final stage, Level 3 Integrated, is conceptualized by Stoltenberg and Delworth (1987) as a generally incorporative stage where Level 3 structures are present in a number of domains and the counselor achieves integration across domains.

Given the value of the IDM model in identifying trainee development including specific trainee and supervisor behaviors, the current study will incorporate this system for investigating interpersonal behavior within the clinical supervisory relationship.

Empirical Research Supporting the Integrated Developmental Model

Research suggests that a framework based on developmental models shows moderate support for predicting supervisory success (Borders, 1990). There are three published empirical tests of Stoltenberg and Delworth's IDM model. McNeill et al., (1992), Bear and Kivlighan (1994), and Leach et al., (1997) all found support of the IDM Theory.

McNeill et al. (1992) while validating the Supervisory Levels Questionnaire Revised, found their instrument to be most sensitive to the Self-and-Other Awareness subscale when differentiating trainees among the three levels of IDM. This was followed by the Motivation and Dependency-Autonomy subscales, respectively. The instrument demonstrated usefulness in identifying Level 1 and Level 3 trainees with difficulty in identifying Level 2 trainees.

Bear and Kivlighan (1994) developed a single-subject study examining the process of individual supervision based on the IDM theory. An experienced supervisor met with both a Level 1 and a Level 3 trainee for 12 sessions. The sessions were coded

for supervisor and trainee interpersonal behaviors by two independent raters. The study utilized the Interpersonal Communications Rating Scale (ICRS) as a coding technique to investigate the interpersonal interaction among the supervisor and trainee. Additionally, trainee statements were rated using the Deep-Elaborative Versus Shallow-Reiterative Scale. A sequential analysis of the coded session transcripts revealed that the supervisor was structured and directive with the Level 1 trainee, who made more dependent responses. The supervisor was found to behave collegially and collaboratively with the Level 3 trainee who made autonomous responses. The Level 1 trainee engaged in deep-elaborative information processing after directive and structuring supervisor responses. The Level 3 trainee engaged in deep-elaborative processing after collegial or consultative supervisor responses. These findings support the IDM model of clinical supervision as presented above.

Leach et al. (1997) examined counselor self-efficacy and counselor development within the Integrated Developmental Model framework. The researchers investigated individual differences of trainees. Higher levels of counselor development were expected to yield high levels of self-efficacy. Participants included 142 masters-level and doctoral-level counseling students who were given the Counseling Self-Estimate Inventory (COSE) and the Supervisee Levels Questionnaire-Revised (SLQ-R). Validity for the SLQ-R was supported by estimates indicating significant differences between the beginning and advanced training groups, and between intermediate and advanced training groups. Results of the study indicated that Level 2 trainees reported greater self-efficacy overall than did Level 1 trainees. Specifically, Level 2 trainees reported greater efficacy of microskills than Level 1 trainees. This finding supports Stoltenberg and Delworth

(1987) who theorized that Level 1 trainees focus primarily on their specific microskills in counseling sessions and were concerned with conducting counseling correctly, whereas Level 2 trainees began to consider the interaction between the client and counselor.

In conclusion, research investigating the IDM model of supervision has demonstrated that a supervisor is generally structured and directive with a Level 1 trainee and collegial and consultative with a Level 2 trainee. Additionally, a Level 1 trainee is dependent and a Level 3 trainee is autonomous. Level 1 trainees consistently score lower on the Self-and-Other awareness domain when compared to the other levels. Level 2 trainees report greater self-efficacy in microcounseling skills, understand process issues, and feel more confident in dealing with difficult client behaviors than do Level 1 trainees. All research findings to date support a developmental process in trainee growth and specifically sustain the IDM model. Accordingly, the IDM model will be incorporated in this study as a measure of trainee and supervisor behavior.

While previous research studies demonstrated support for trainee development, Holloway (1987) has suggested that traditional supervision studies focusing on development aspects of the supervisory relationship were inadequate in delineating underlying mechanisms at work in this relationship. Her general conclusions imply that the developmental formation of the trainee's professional identity was not the primary mechanism involved in changes that occur in the trainee. Rather, she suggests that the common mechanism operating in all of the models was the supervisory relationship and concludes that this relationship may well be responsible for changes in the trainee from initial vulnerability to final independence. The relationship between the supervisor and

trainee was an interpersonal encounter and should be viewed in terms of Interpersonal Influence Theory.

Interpersonal Influence Theory

Interactional counseling theory, practice, and research methodology was greatly influenced by the interpersonal theory of personality. In their extensive review of interactional counseling theory, Claiborn and Lichtenberg (1989) cite the early work of Sullivan and Leary as laying the groundwork for interpersonal theory. A key principle to this theory is Sullivan's (1953) definition of personality as existing only in terms of the interpersonal interactions among people. In addition, Leary (1957) operationalized interpersonal interaction as a circumplex model with reciprocal rather than linear causality. Sullivan, and later Leary, provided two central themes to what is known as interpersonal influence theory today. Claiborn and Lichtenberg integrate these viewpoints in their statement, "in an interactional view of counseling, behavior is considered to be simultaneously influenced by the person's view of the world (interpretations, expectations, and choices) and by the world the person is viewing, particularly the behavior of others with regard to the person (p. 356)." When Leary moved away from mainstream psychology, others, most notably Benjamin (1974), continued and expanded upon his, and Schaefer and Plutchik's (1966) pioneering work in interpersonal interaction rating scales.

Benjamin (1974), while borrowing heavily from Leary's theory, departed from his original conceptions in two significant ways. Initially, the Structural Analysis of Social

Behavior (SASB) model contained three circular surfaces of social behavior contrasted with one circumplex surface as in the Leary model. In Benjamin's SASB model, two of the circles (Self and Other) involve interpersonal transactions whereas the third characterizes internalized or intrapsychic experiences. Secondly, the Leary version places submission opposite dominance on the vertical axis of a single domain. The SASB use of emancipation opposite dominance follows Schaefer and Plutchik's (1966) lead. The implication of this change is that submission goes with or complements dominance. Submission does not, as hypothesized by the Leary-based circumplex models, oppose dominance. The SASB model provides that if one person is dominant and the other is submissive, they are in a harmonious, not opposing, relationship (Benjamin, 1996).

The SASB model of social interaction was developed to describe and measure interpersonal and intrapsychic interactions. Benjamin's SASB is fitted for the purpose of investigating and measuring pairs of dyadic relationships. Henry (1996) argued that SASB, and the circumplex tradition on which it is based, is ideally suited to provide a common descriptive language in discovering how dyadic interactions produce change in persons. SASB has been judged by Mclore and Hart (1982) to be "the most scientifically rigorous and clinically astute" (cited in Coady & Mazriali 1994, p.233) circumplex model of interpersonal behavior. The validity of the SASB has been established by methods of factor analysis, circumplex analysis, autocorrelation techniques, and dimensional ratings (Benjamin, 1974). Given the usefulness of the SASB model in psychotherapy interactions between the therapist and client, the current study will incorporate this system for investigating interpersonal communication between supervisor and trainee in supervision sessions. As Bernard and Goodyear (1998) inform us, theory and research on the

supervisor-trainee relationship often has evolved as a distinct extension of theory and research on therapist-client relationships.

In Benjamin's SASB model there are three circles of investigation. Two of the circles involve interpersonal transactions, whereas the third characterizes internalized or intrapsychic experiences. The first circle consists of a Focus on Other and is concerned with another's behavior, such as affirming or helping. The second circle represents a Focus on Self and is concerned with reactions to another's behavior, such as submission or withdrawal. The third circle, Introjection, involves turning inward and reflects how one has been treated by significant others, such as a spouse or teacher. There are two principle dimensions defining each of the three circumplex surfaces including Affiliation (friendly versus hostile) on the horizontal axis and Interdependence (directing versus emancipating) on the vertical axis. On the Focus on Other circle (Surface 1), Affiliation ranges from attacking and rejecting to nurturing and comforting, and Interdependence ranges from watching and managing to freeing and forgetting. On the Focus on Self circle (Surface 2), Affiliation ranges from protesting and recoiling to approaching and enjoying. Interdependence ranges from asserting and separating to deferring and submitting. On the Introject circle (Surface 3), Affiliation ranges from self-rejecting and destroying to self-nurturing and cherishing. Interdependence ranges from self-monitoring and restraining to spontaneous self.

According to the SASB model, interpersonal transactions are represented by a language constructed of the two basic dimensions of Affiliation and Interdependence expressed via (a) transitive action toward others, (b) intransitive reactions to others, or (c) introjected actions toward the self. Each of these three surfaces of the model is built on

two axes (see Figure 1 p. 51). The horizontal axis runs from disaffiliation on the left to affiliation on the right; the vertical axis runs from maximal dependence at the bottom to maximal interdependence on the top. These axes define the eight interpersonal quadrants and four intrapsychic quadrants. Each surface contains 36 interpersonal behaviors. Benjamin (1984) subsequently developed a cluster version of her model. Here she reduced the 36 points of each circle into eight clusters, four quadrants, or two halves that have been psychometrically validated (Benjamin, Foster, Gait-Roberto, & Estroff, 1986).

Independent raters may be trained to code moment-to-moment interpersonal processes on all dimensions. Additionally, the content of a dyadic exchange may also be coded for the specific interpersonal interaction of interest. Coding itself requires a series of three decisions. First, the focus (Surface 1 versus Surface 2) of the thought unit is established (thought units in the SASB system usually consist of noun or subject, verb, and object). Second, the thought unit is rated on a 5-point scale representing the primitive affiliation-disaffiliation vector. Third, the thought unit is rated on a 5-point scale representing the primitive independence-interdependence vector. Finally, the affiliation and autonomy ratings are used as Cartesian coordinate points to place the thought unit in its proper place.

One principle of interpersonal behavior revealed by SASB is the notion of complementarity. Complementarity captures the relations between the focus on other and focus on self surfaces. Within the framework of SASB, if the speaker is focusing on other (Surface 1), there is a strong "pull" for the respondent to react by self-focus (Surface 2) at the same point in interpersonal space. For example, according to the principle of complementarity, friendliness pulls for friendliness and hostility for hostility on the

affiliation dimension (Constantino, 2000). Complimentary behaviors reflect stable dyadic relations that can have either a positive or negative effect on the degree of attraction or aversion that an individual feels toward another. An example of a positive complementarity interaction in supervision occurs when a supervisor empathically expresses an understanding of the trainee's emotional state. This affirming and understanding pulls for the trainee to respond in a complimentary manner with further emotional disclosing and expressing (see Figure 1 p. 51). An example of negative complementarity within a supervisory relationship occurs when a supervisor blames (belittling and blaming) a trainee for his or her lack of skill development, which pulls for the trainee to react by sulking and appeasing rather than proceeding with the more developmentally valuable process of disclosing and expressing.

Empirical Research Supporting the Structural Analysis of Social Behavior

Since its inception, the SASB has emerged as a popular model that has proven useful to both clinicians and researchers. Pincus and Benjamin (1998) argued that SASB provides an overarching paradigm, methodology, and theoretical framework that is applicable across clinical orientations and allows one to define and codify fundamental interpersonal and dynamic processes in personality development, psychopathology, psychotherapeutic change, as well as other dyadic relationships. Benjamin (1978) suggests the SASB is not restricted to any one theoretical approach or to any specific context. Dyadic contexts include client-therapist, parent-child, and supervisor-trainee relationships. The SASB system was used by researchers to investigate psychotherapy

process and outcome, as well as to measure changes in therapist behavior while in training (Coady & Mazriali, 1994; Henry, Schacht, & Strupp, 1986, 1990; Henry, Strupp, Butler, Schacht, & Binder, 1993, Svartberg & Stiles, 1992).

Henry et al. (1986), utilizing the SASB coding process investigated interpersonal process in differential psychotherapeutic outcome. Four psychotherapists each conducted therapy with a high- and low-change case (N=8); specifically, good and poor outcome as measured by pre-post Minnesota Multiphasic Personality Inventory profiles and ratings or target complaints and global change by clients, therapists, and independent clinicians. Transcripts and audio recordings of each third session were selected for coding as the researchers assumed, based on prior research, that the nature of the working alliance in time-limited therapy is well established by this time. Raters who were blind to the outcome status of each case analyzed the first 150 thought units of each dyad in the specified session. The researchers chose this segment of each session arbitrarily, following the lead of Gomes-Schwartz (1978), who found no systematic difference in process scores attributable to the time sequence of rated segments. Independent interrater agreement in SASB cluster assignment was reported as high (Cohen's kappa = .91, based on 150 judgments). Subsequent analyses revealed greater levels of helping and protecting, and affirming and understanding, and significantly lower levels of blaming and belittling were associated with high-change cases. Client behaviors of disclosing and expressing were significantly frequent in high-change cases, whereas walling off and avoiding and trusting and relying were significantly frequent in low-change cases. Additionally, negative complementarity was greater in poor outcome cases.

Svartberg and Stiles (1992), in their pilot study, investigated therapist competence and client-therapist complementarity as measured by the SASB. They investigated the interrelation and unique, collective, and interactive contributions to client change in 20 sessions of short-term psychotherapy. Data for the complementarity analysis were provided from the fourth therapy session. Transcripts based on units of speech (i.e., independent clause of subject, verb, and object) from the middle 15 minutes of the session were then subject to process coding by two independent raters. Results suggest that client-therapist positive complementarity in early session predicted shorter-term client change both alone and over and above therapist competence. This adds to the findings of Henry et al. (1986) in suggesting the importance of interpersonal complementarity as a predictor of successful change in short-term dynamic psychotherapy.

Henry et al. (1993) investigated effects of training on therapist behavior in time-limited dynamic psychotherapy. Sixteen therapists participated in a year-long manualized training program as part of the Vanderbilt II study of time-limited dynamic psychotherapy. Changes in therapist behavior were measured with the Vanderbilt Therapeutic Strategies Scale (an adherence measure), the Vanderbilt Psychotherapy Process Scale (VPPS), and interpersonal process codings using the SASB. Middle 15-minute segments of videotaped third sessions were rated by two raters each who were unfamiliar with the training status of the cases. Cohen's kappa was used to measure interrater reliability. The unweighted kappa for cluster assignment was .75. The training program successfully changed therapists' technical interventions in line with the manualized protocol. After training, there was increased emphasis on the expression of

in-session affect, exploration of the therapeutic relationship, improved participant-observer stance, and greater use of open-ended questions. Unexpected deterioration in certain interpersonal and interactional aspects of therapy was indicated as measured by the VPPS and SASB ratings. The researchers assumed that changing or dictating specific therapist behaviors to achieve technical adherence may alter other therapeutic variables in unexpected and even counterproductive ways.

Coady and Marziali (1994) utilized the SASB coding system, as well as a measure of therapeutic alliance, to examine the association between global and specific measures of the therapeutic relationship in sessions 3, 5, and 15 of nine cases of time-limited psychodynamic psychotherapy. Due to the sole focus on interpersonal behavior, the researchers used Surface 1 (other) and Surface 2 (self) omitting Surface 3 representing intrapsychic actions. From typed transcripts and audiotapes of the specified treatment sessions therapist and client verbal behavior units were identified and assigned cluster codes using the guidelines in the SASB coding manual (Benjamin et al., 1981). Two independent raters coded the first 200 verbal behavior units. This represented the first 20-25 minutes in each of the three sessions included in the investigation. Interrater reliability level based on mean Cohen's weighted kappa equaled .70, based on 200 judgments in each of four reliability trials. Correlational analyses between the SASB ratings and Alliance scores revealed consistent associations between ratings of client contributions to the alliance and SASB ratings of client behaviors than there were for the same therapist variables. Additionally, analyses showed that external (i.e., non-self) judgments of client and therapist contributions to the alliance, rather than therapist or client self-ratings of contributions to the alliance, were most frequently associated with the clinical judge rated

SASB measure. The researchers suggested therapists and clients have difficulty maintaining objectivity while involved in a subjective process.

In summary, the SASB coding system has proven useful in measuring change in persons as directly impacted by their interpersonal relationships. Benjamin (1974) reminded that the SASB is not restricted to any one theoretical approach or to any specific context. Bernard and Goodyear (1998) state, theory and research on the supervisor-trainee relationship often has evolved as a distinct extension of theory and research on therapist-client relationships. Researchers have provided support for the validity of the SASB system in investigated dyadic relationships and as such this model will be incorporated in the present study to measure patterns of behavior among supervisors and trainees in clinical supervision sessions.

Linking the Integrative Developmental Model with the Structural Analysis of Social Behavior

The IDM provided specific trainee behaviors that correspond with the SASB. The IDM described trainee dependence behaviors which included a desire for the supervisor to provide information that they could use to provide an overall structure for their counseling with clients. There are corresponding codes for this type of trainee behavior within the SASB model. These codes include Friendly Acceptance and Hostile Compliance.

As trainees develop they function more independently leaving behind the desire for the supervisor to provide specific information or structure. The trainee functions in an

autonomous manner. The corresponding SASB behavior codes in the same interpersonal space as described by the IDM include Enjoy Friendly Autonomy and Take Hostile Autonomy.

The IDM is comprehensive in describing appropriate supervisor behaviors recommended for fostering trainee development. Initially, the supervisor was called on to provide structure within the supervisory relationship and complete this by being directive with the trainee. The SASB model has corresponding behavior codes for this type of interaction labeled as Friendly Influence and Hostile Power.

As trainees develop the IDM suggested a shift in supervisor behavior. The supervisor was called upon to allow autonomous trainee behavior and interact with the trainee in a collegial and consultative manner. The SASB model again provided corresponding codes for the type of behavior. The behavior are in the category of either Encourage Friendly Autonomy or Invoke Hostile Autonomy.

A graphic representation of the Integrated Developmental Model (Stoltenberg and Delworth, 1987) of clinical supervision and the Structural Analysis of Social Behavior (Benjamin, 1999) coding model correspond in the following ways:

Integrated Developmental Model		Structural Analysis of Social Behavior
Trainee need to be advised/guided, dependence behaviors	=	Friendly Acceptance and/or Hostile Compliance
Trainee functions as independent, autonomy behaviors	=	Enjoy Friendly Autonomy and/or Take Hostile Autonomy
Supervisor provides structure and is directive	=	Friendly Influence and/or Hostile Power
Supervisor allows autonomy, shares more and is collegial/consultative	=	Encourage Friendly Autonomy and/or Invoke Hostile Autonomy

Sequential Analysis

Wampold (1984, 1986, 1992) has been instrumental in furthering the statistical process known as sequential analysis in the study of human relationships. Sequential analysis applied to dyadic communication is thought of as the probability of behavior X occurring given the presentation of behavior Y above and beyond behavior X occurring by chance. The statistical process of sequential analysis can numerically represent the probability of behavior X given behavior Y. In addition to Wampold, Lichtenberg and Heck (1996) suggested lag sequential analysis in studying interpersonal communication.

Lag-1 sequential analysis was incorporated in the current study. A lag of 1 is understood as investigating the initial response of speaker B as a result of the behavior speaker A lead with. Increasing lags (2, 3, 4, etc.) can be used to investigate interpersonal behaviors down the line from the target behavior in interpersonal communication between two or more persons. Lag-1 sequential analysis is of interest in this study as direct effects of supervisor and trainee behaviors are the objects of study.

The foundation of lag sequential analysis is that speaking behaviors in dyadic communication can be measured within a single probability process. Codes are assigned to each speaking event which Lichtenberg and Heck (1986) suggest be carried out "in terms of a finite number of mutually exclusive and exhaustive categories" (p. 174) of behaviors. In the process of determining statistical significance, a given behavior's probability of occurring by chance is compared with its lag occurrence and this value is represented as a Z score. Positive Z scores indicate that the lag behavior occurred more

than would be expected by chance and negative Z scores indicate the lag behavior was less likely to occur than would be expected by chance (Bear, 1990).

Wampold (1992) described tests for dominance in interpersonal communication as another specific utilization of sequential analysis. Dominance can be determined in any dyadic relationship and is used specifically with the supervisory relationship in this study. If a trainee's behavior were statistically more predictive from a supervisor's behavior then the supervisor would be considered dominant with the evidenced behavior. Parallel Dominance (*i* to *j* versus *j* to *i*) is the statistical test developed by Wampold (1984) to determine significance of asymmetry in predictability. Dominance is gauged by examining the difference of T_{ij} and T_{ji} resulting in a Z score. The formula for a Z score is:

$$Z = \frac{(T_{ij} - T_{ji}) - E(T_{ij} - T_{ji})}{\sqrt{\text{Var}(T_{ij} - T_{ji})}}$$

While the Z score is a measure of statistical significance in answering the parallel dominance question, there is no information concerning the size of the effect. Wampold (1989) modified the kappa statistic as a measure of pattern among social interactions. He explains that "kappa is a statistic that compares the obtained value of a statistic with its maximum" (Wampold, 1992 p. 104). The formula for Kappa is (Hubert, 1977):

$$K = \frac{X - E(X)}{\text{Max}(X) - E(X)}$$

Transformed kappa is the modified statistic produced by Wampold (1989) and it's value ranges from –1 to 1. The larger the absolute value of the transformed kappa the greater the extent of pattern in the observed social interaction, with negative values indicate a

decrease in subsequent behavior and positive values indicate and increase in subsequent behavior.

Empirical Research in Clinical Supervision Utilizing Sequential Analysis

Holloway (1982) investigated the interactional structure of clinical supervision utilizing a unidirectional sequential analysis. Holloway states "The primary intent of this investigation was to describe the sequential patterns of verbal behaviors that occur between the supervisor and trainee in the supervisory interview" (p. 309). In this study five supervisors, four having four and one having three trainees, audiotaped sessions 3, 6, and 9. Independent raters using an adapted version of Blumberg's (1970) system for analyzing supervisor-teacher interactions coded a 20-minute segment of each of the resulting 43 (some recordings were not audible) recorded supervision interviews. Minutes 10-30 were chosen to avoid introductory social comments that generally occur in the opening of a session and to avoid variability in the length of scored periods due to the premature termination of some interviews. In analyzing the data, the researcher utilized a composite transition frequency matrix of all 43 interviews as the data base for the sequential analysis. She incorporated a quadratic assignment paradigm to determine whether the probability that particular behavior emitted previously by the other member of the dyad, was greater or less than the probability of these behaviors' being emitted by chance. For example, when supervisors used supportive communication, including reflection of feelings, direct praise, and development of the trainee's ideas, they elicited most frequently the trainee's positive social emotional behavior. Holloway concludes that

certain repetitive patterns of verbal behavior occur in the supervisory interview and that sequential analysis can effectively describe these interactions.

Holloway and Wampold (1983) investigated patterns of verbal behavior and the judgments of satisfaction in clinical supervision. The participants were 9 doctoral level student supervisors and 30 maters level practicum students. A modified version of Blumberg's Interactional Analysis System was utilized to code audiotaped supervision sessions 3, 6, and 9. The researcher, choosing the session to code, wanted to capture more than one stage of the supervisory relationship. A sequential analysis methodology was employed to characterize interactional patterns. Areas of satisfaction that were assessed included supervisor's (or trainee's) evaluation of the other, the supervisor's (or trainee's) evaluation of self, and the supervisor's (or trainee's) level of comfort in the session. Multiple regression was used to identify patterns of social interaction that predict satisfaction in each of the three areas. The researchers summarize their findings with three points. First, negative social emotional behavior, including defensiveness or criticism on either the supervisor's or trainee's part, adds to the discomfort experienced in the interview and the supervisor's lowered evaluation of the trainee. Second, the supervisor following the trainee's expression of ideas with a request for more ideas adds to the positive self-evaluation by both participants. Third, supervisors devalued both themselves and the trainees for excessive use of supportive communication within the context of the trainee's positive social emotional behavior, and it was not a positive predictor of the trainee's judgment factors.

The published research by Bear and Kivlighan (1994) presented earlier in this chapter, incorporated sequential analysis to inform their research questions concerning

the interpersonal interaction among participants in clinical supervision. Behaviors of an advanced and novice trainee, as well as the supervisor, were coded and entered in a sequential analysis. The results of the analysis demonstrated that the supervisor was more structured and directive with the novice trainee and in turn the trainee was found to make more dependent responses. As for the advanced trainee, the supervisor was found to behave more collegial and collaborative and in turn the trainee made more autonomous responses than the novice trainee. The novice trainee engaged in more deep-elaborative information processing after directive and structuring supervisor responses. The Level 3 trainee engaged in more deep-elaborative processing after collegial or consultative supervisor responses. This study also incorporated an intensive single-subject case design as is selected in the current study.

Conclusion

This chapter reviewed the literature on the effectiveness of supervision, the role of technology in supervision, developmental models of supervision, empirical research on the Integrated Developmental Model of supervision, interpersonal influence theory, empirical research on the Structural Analysis of Social Behavior, an explanation of sequential analysis, and empirical research in clinical supervision incorporating sequential analysis. The methodology used for this study is presented in Chapter III.

CHAPTER III

METHODOLOGY

Participants

The participants in this study included one clinical supervisor and two beginning trainees. The criteria for selecting a clinical supervisor included having a doctoral degree and licensure in psychology. Several faculty members were approached concerning participation. One both expressed interest and agreed to participate. At this time the participant completed an informed consent and demographic information sheet. The supervisor had an earned doctorate in clinical psychology, was licensed as a clinical psychologist, and a faculty member in the Educational Psychology Program at a large south-central university. The supervisor taught courses in counseling psychology, educational psychology, and community counseling; he also provided clinical supervision to student trainees. The supervisor had two years of clinical supervision experience prior to this study.

The potential pool of trainees included those enrolled in masters level practicum class at a large south central university across two campuses. The potential in person trainee attended the main campus and the potential distance trainee attended the satellite campus. A brief introduction of the research was provided at each practicum class

including their supervision provided by a licensed psychologist. This differed from what was routine for their practicum supervision. Historically, counseling psychology doctoral students provided the supervision to these practicum students. Those interested completed informed consent, the Supervisory Levels Questionnaire – Revised, and a demographic information sheet. A potential pool of 11 trainees was identified. The criteria for selecting two trainees included matching for sex and supervisory level. The trainees were two master's level students enrolled in their second practicum in the Community Counseling program at the same university. One trainee was enrolled in the Community Counseling program based out of a satellite campus and the other trainee was enrolled at the main campus.

Instrumentation

Demographic Data Sheet

Each participant filled out the Demographic Data Sheet (Appendix B) before the supervision sessions began. The form asked for the participant's personal assessment of experience and competence, as well as theoretical orientation. Additionally, information about experience using videoconferencing technology was colleted.

Structural Analysis of Social Behavior (SASB)

The Structural Analysis of Social Behavior (SASB; Benjamin et al., 1981) is a coding system designed to assess interpersonal communication along two dimensions, affiliation and interdependence (see Figure 1 p. 53). There are two separate surfaces of investigation utilized in this study, including Focus on Other and Focus on Self. The two dimensions on each surface are divided into eight categories by four dissecting dimensions. Within the Focus on Other circle (Surface 1), Affiliation ranges from attacking and rejecting to nurturing and comforting while Interdependence ranges from watching and managing to freeing and forgetting. Within the Focus on Self circle (Surface 2), Affiliation ranges from protesting and recoiling to approaching and enjoying while Interdependence ranges from deferring and submitting to asserting and separating. Each surface contains 36 interpersonal behaviors, which may be collapsed into eight clusters that have been psychometrically validated. The eight clusters on Surface 1 include freeing and forgetting, affirming and understanding, nurturing and comforting, helping and protecting, watching and managing, belittling and blaming, attacking and rejecting, and ignoring and neglecting. The eight clusters on Surface 2 include asserting and separating, disclosing and expressing, approaching and enjoying, trusting and relying, deferring and submitting, sulking and appeasing, protesting and recoiling, and walling off and avoiding.

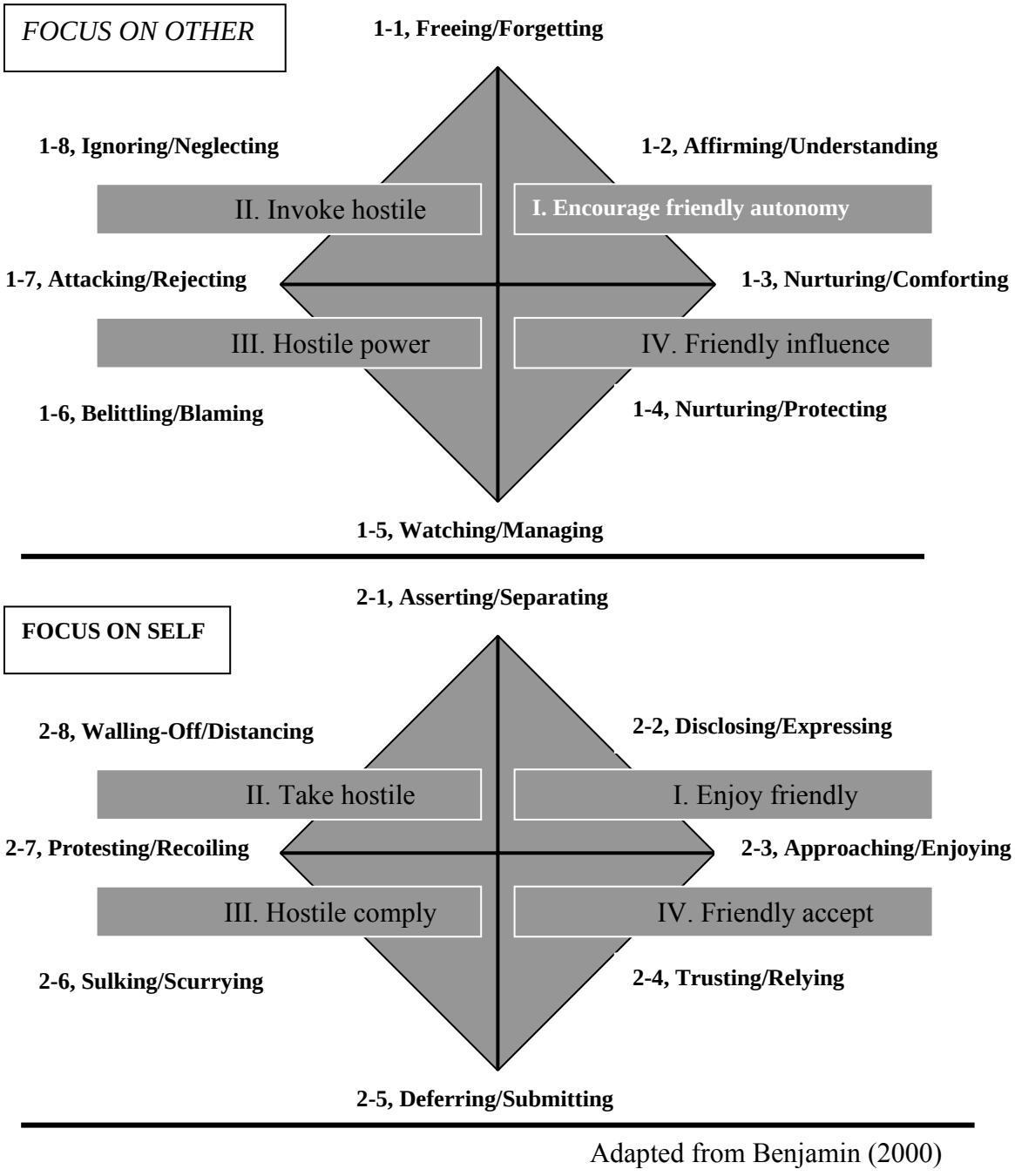

Figure 1. Structural Analysis of Social Behavior Combined Quadrant and Cluster Models

The SASB constructs are coded directly from supervision transcripts by independent raters who have been trained in using the model (Benjamin et al. 1981). The selected section of the transcript is broken down into thought units that represent any portion of speech expressing one complete thought on the part of the supervisor or trainee. After the separation of thought units, the coding process involves several decisions including: (1) establishing of the focus (i.e., deciding whether the person speaking is transitively acting toward the other or intransitively reacting to the other, (2) rating degree of affiliation (i.e., degree of love vs. hate on the vertical axis continuum), (3) rating degree of interdependence (i.e., degree of autonomy-granting vs. controlling if the focus is on the other or the degree of taking autonomy vs. submitting if the focus is on the self), and (4) establishing the location of the thought unit based on the previously described ratings on the appropriate domain (typically one of the 8 clusters). Audio recordings were used in conjunction with the transcripts to add the element of tone and voice quality to the context for the coding process.

The SASB system has proven as a reliable coding system (Henry et al., 1986, 1993; Coady & Marziali, 1994). Wampold (1992) and Benjamin (2000) suggest requiring coders to meet a criterion based on percentage agreements corrected for chance Cohen's (1960) weighted kappa. This stringent type of reliability assures, to an extent, the reliability of the constructs to be measured in a study. Henry et al., (1986) reported independent interrater agreement in SASB cluster assignment as high (Cohen's kappa = .91, based on 150 judgments). Henry et al., (1993) reported Cohen's kappa for cluster assignment as .75. Coady and Marziali (1994) reported interrater reliability level based on Cohen's kappa equaling .70, based on 200 judgments.

The Supervisory Levels Questionnaire (SLQ-R)

The SLQ-R is a 30-item instrument designed to delineate characteristics on a continuum of development associated with levels hypothesized by the IDM (Stoltenberg& Delworth, 1987). Items based on counselor characteristics were derived to form three subscales reflecting the overriding structures of the model: Self and Other Awareness, Motivation, and Dependency-Autonomy. The three scales are summed to indicate a composite score. Stoltenberg and Delworth (1987) reported that the SLQ-R composite score is most sensitive to the difference in developmental level. In their scale development research, McNeil, Stoltenberg, and Romans (1992) present mean and standard deviation (SD) composite scores for beginning, intermediate, and advanced trainees. Results were obtained on 22 beginning trainees with a mean composite score of 133.7 (SD=7.38), 48 intermediate trainees with a mean composite score of 136.3 (SD=16.2), and 35 advanced trainees with a mean composite score of 147.4 (SD=14.3).

Internal reliability coefficients for the SLQ-R were reported as .83, .74, .64, and .88 for the three subscales and the total score respectively (McNeill et al., 1992). The instrument developers used a series of focused, one-way planned contrasts (t tests) to test their hypothesis of total scores increasing as a result of trainee experience. With alpha set at .05 they consistently found significant differences between the beginning and the advanced training groups and between intermediate and advanced training groups. No significant differences were obtained between the beginning and intermediate groups. The researchers also utilized product-moment correlation as a measure of effect size. Obtained correlations for significant effects consistently fell in the “medium” range (p.

506). This instrument was selected as a measure of comparability between trainees selected for participation in this study. While the authors have not indicated clear delineations in trainee level using composite scores, item endorsement totals can be an indication of developmental level (McNeill et al. 1992).

Procedure

An appropriate application to the Institutional Review Board was made and approved (Appendix E). There were two trainees and one supervisor involved in this study. The three volunteer subjects for this study were solicited from a pool of appropriate subjects. The supervisor pool consisted of the faculty in the Counseling Psychology/Community Counseling program at a large south central university. The trainee pool consisted of persons enrolled in their second practicum class on two different campuses at the same university. Potential participants received a description of the study included with the informed consent information (Appendix A). Once the faculty member and the two students agreed to participate, they completed the demographics information sheet and the Supervisory Levels Questionnaire-Revised (students only). Every attempt was made to match the potential trainees on demographics and supervisory level. Specifically, an attempt was made to identify two trainees who were similar in experience level, as measured by the SLQ-R, types of clients they were serving, and theoretical orientation. In addition, the trainees were matched for their sex to limit differences due to sex of the participants.

Once two trainees were deemed compatible according to the criteria, they were contacted for inclusion in the study. The selected supervisor met weekly with each of the trainees for the period of one semester. All sessions were audiotaped. After the last scheduled (in person dyad had 11 meetings and the distance dyad had 12 meetings) session, the supervisor and trainees participated in an exit interview following the Interview Guide (Appendix D) questions. The interviews were also audiotaped. There is at least 15 available weeks in a semester for supervision, yet each supervision pair had occurrences of missing meetings due to illness and scheduled vacation time.

Supervision Condition and Technology

Each supervision dyad met for one semester. One condition of supervision was a traditional in-person format conducted on the main campus of a large south central university. The other condition of supervision communicated via videoconference, using the Intel TeamStation hardware and software. The distance communication took place utilizing the Internet between the main and satellite campuses. The faculty supervisor was at the main campus and the trainee at the satellite campus.

The Intel TeamStation is a videoconferencing system located at each of the campuses in this study. The hardware of the system includes a Pentium III computer (128K RAM) running a Microsoft Windows NT operating system with videoconferencing displayed on a 27-inch television monitor. The two TeamStations were connected by a university LAN network with T-1 internet connection allowing for large (greater than 384 kilobytes per second [kbs]) bandwidth. The TeamStation software

and hardware allowed for 384kbps of information transfer equaling 30 frames per second video transmission of motion images. The television screen contained a multi-window environment allowing for near- and far-end video pictures so users can see the person they are meeting and see themselves in different boxes on the screen. There is a portable table microphone, wireless keyboard, and a mechanical camera with 12X power zoom, power tilt, and pan for directional movement.

Data Collection

All sessions of each supervision dyad were audiotaped by use of a michrophone and tape recorder placed in the room. Concluding each supervisory session, the principal researcher collected the audiotape. Each tape was transcribed into a typewritten transcript by the principal researcher. The tapes and type-written transcripts were then mailed to the independent raters. An independent rater coded 20 minutes (10-30) of sessions 3, 5, 9, and last meeting for each supervision dyad utilizing the Structural Analysis of Social Behavior (SASB) coding system. Precedents for coding these session segments and frequency of data collection have been demonstrated in the published research (Coady & Marziali, 1994; Henry et al. 1993; Svartberg & Stiles, 1992). Each supervisory session was coded by one rater, with cross-rating of session 9 to provide a reliability estimate. The raters were two doctoral level graduate students who had received extensive training in the use of the SASB from the author, Lorna Smith Benjamin. The raters were doctoral students of Dr. Benjamin and were compensated financially for their efforts. When coding the sessions the raters worked from typewritten transcriptions of the sessions

while listening to the audio recordings. These trained raters demonstrated an interrater reliability estimate of .89 using the weighted kappa of Cohen, 1968. This weighted Kappa had a corresponding z score of 27.48, significant at the $p < .0001$ level.

Analysis of Data

Chi Square Tests

The Structural Analysis of Social Behavior Works Program (SASBWorks) statistical software package developed by Benjamin (2000) was used in data calculations. The SASBWorks program, a windows based program, was used in tallying the total and proportion of responses needed to test hypotheses 1.a through 1.j. These values were tallied for the trainee and supervisor in each condition. Chi-square analyses were performed using the raw data totals to determine if the subjects differed significantly in their proportion of responses given their condition of supervision and length of time in the supervisory relationship. These analyses were single sample Chi squares with one degree of freedom. This case calls for adjustments to observed values, .5 was added to each observed value that was less than the expected value and .5 was subtracted from each observed value greater than the expected value. An alpha level of .05 was selected as a significance level.

Sequential Analysis

Sequential analysis was another statistical process applied to evaluate the coded data in this study. The Sequential Analysis Program (SAP) statistical software package developed by Wampold (1989) was used in this study to perform the required analyses. The SAP, a DOS based program, was used to perform the dominance tests included in hypothesis 2.

The SAP statistical program was used to determine Z scores and transformed kappa (Kappa t) values to answer the dominance questions. In sequential analysis of parallel dominance, a structure matrix is created and compared to the transition frequency matrix. The quadratic assignment data analysis strategy provides a framework from which to compare the patterns in these two matrices. "The distributional characteristics of this comparison account for the dependencies among the various entries in each matrix" (Hubert & Shultz, 1976 as cited in Wampold, 1984 p. 104).

The parallel dominance tests yield Z scores, computed by the SAP program, demonstrating the statistical difference between an event's conditional and unconditional probability. Significance levels for these standard Z scores were be obtained from a Z table (Fleiss, 1981). One limitation of this process is that a significant Z score does not provide information about the size of the effect, or the degree to which the pattern is manifest (Wamopold, 1992). To solve this issue Wampold (1989) adapted the Kappa statistic, transformed kappa, to measure pattern in social interactions. Transformed kappa ranges from –1 to 1. Other measures of effect size are interpreted as a proportion of variance accounted for, however, the transformed kappa does not work in the same way.

Transfromed kappa reflects the degree to which a pattern is represented in a social interaction. “Larger transformed kappas indicate that the pattern occurs to a greater extent” (Wampold, 1992 p. 104).

Interview Analysis

Interviews were conducted with each participant after twelve weeks of involvement with the study. Each interview was structured to follow a question sequence as presented in Appendix D. The three interviews were transcribed and coded for content using the interview questions as a guide for the coding process. Themes were identified and presented in a narrative report of this data. This process illuminated a deeper understanding of the experience of clinical supervision from the perspective of the participants. Specifically, the outcomes of this a qualitative data gathering scheme supplements the quantitative findings in addressing the effectiveness or ineffectiveness of distance supervisory methods.

CHAPTER IV

RESULTS

This chapter presents the results of the data analyses as outlined in Chapter III and is outlined by the following sections: Demographic Information, Tests of Hypotheses, and Summary.

Demographic Information

The supervisor in this study was a 42 year old white male. He had a Ph.D. and was licensed as a clinical psychologist. He had two years of previous clinical supervisory experience. Incorporating a 7-point Likert scale with 1 = not at all and 7 = greatly, the supervisor was asked to rate his adherence to three broad therapeutic orientations. This supervisor endorsed a Psychoanalytic and/or Dynamic orientation as "6," and a Humanistic and/or Experiential orientation as "5." He also endorsed a Behavioral and/or Cognitive orientation as "2." The supervisor rated himself as newly experienced "2"; (1 = inexperienced, 7 = very experienced) and quite competent ("5"; 1 = incompetent, 7 = extremely competent) in a supervisory role. The supervisor indicated the salient needs for beginning counselors as "Understanding assessment risk for harm and substance abuse, diagnosis, treatment planning, limits of competence, and need for referral." Additionally,

the supervisor indicated that a salient need was an "understanding of the impact of transference and counter-transference issues on therapy process."

The trainee participating in clinical supervision at a distance was a 25 year-old white female completing her second semester of practicum in a masters level counseling training program. Her responses on Supervisory Levels Questionnaire- Revised resulted in a composite score of 120 demonstrating a beginning level trainee (McNeil et al., 1992). This trainee endorsed a Behavioral and/or Cognitive orientation as "7" (1 = not at all, 7 = greatly) as well as Humanistic and/or Experiential as "5" and Psychoanalytic and/or Dynamic as "2." This trainee rated herself a "4" on a 7-point Likert scale in terms of experience as a counselor (1 = inexperienced, 7 = very experienced). On a corresponding Likert scale of competence (1 = incompetent, 7 = extremely competent) this trainee rated herself as "5." This trainee described some prior experience with videoconferencing technology limited to faculty meetings as a student representative for her masters training program. She listed the critical needs in supervision this semester as "obtaining/receiving feedback regarding counseling skills."

The trainee participating in clinical supervision in-person was a 24 year-old multiracial (white and Native American) female completing her second semester of practicum in a masters level counseling training program. Her responses on Supervisory Levels Questionnaire- Revised resulted in a composite score of 122, demonstrating a beginning level trainee (McNeil et al., 1992). This trainee endorsed a Behavioral and/or Cognitive orientation as "6" (1 = not at all, 7 = greatly) as well as Humanistic and/or Experiential as "4" and Psychoanalytic and/or Dynamic as "4." This trainee rated herself a "6" on a 7-point Likert scale in terms of experience as a counselor (1 = inexperienced, 7

= very experienced). On a corresponding Likert scale of competence (1 = incompetent, 7 = extremely competent) this trainee rated herself as "6." This trainee described some prior experience with videoconferencing technology limited to a one-time colloquium incorporating the technology. She listed the critical needs in supervision this semester as "having a supervisor who is reliable and willing to give honest feedback and not make everything I do seem so good."

Tests of the Hypotheses

Chi Square Analysis

In order to test hypotheses 1.a. through 1.j. total instances of evidenced behaviors were calculated by the SASB Works program. These behavior totals were then entered into Chi Square analyses to test for significant differences in dependent and autonomous trainee behaviors as well as directive and collegial supervisor behaviors in early and later supervision sessions. These analyses were single sample Chi Square calculations calling for a correction for one degree of freedom. Specifically, .5 was added to each observed value that was less than the expected value and .5 was subtracted from each observed value greater than the expected value. The same analyses were performed to test for significant differences in participant's behavior between supervision conditions of in-person and at a distance. Because no hostile trainee behaviors (Hostile Compliance and Taking Hostile Autonomy) or hostile supervisor behaviors (Hostile Power and Invoke Hostile Autonomy) were observed in any coded session, the hypotheses were tested using

only friendly behaviors of the trainees (Friendly Acceptance and Enjoy Friendly Autonomy) and supervisor (Friendly Influence and Encourage Friendly Autonomy).

Hypothesis 1.a. stated that trainees in both in-person and distance conditions will demonstrate more dependent than autonomous behaviors in early supervision sessions. Results of the Chi Square for the in-person trainee = 6.78 with a significance level of p=.0092. Results of the Chi Square for the distance trainee = 4.30 with a significance level of p=.0381 (see Table 1, p. 66). Both of the in-person and distance trainees demonstrated significantly more Enjoy Friendly Autonomy behaviors than Friendly accept behaviors in early clinical supervision sessions. This significant finding was in the opposite direction than hypothesized.

Hypothesis 1.b. stated that trainee's in both in-person and distance conditions will demonstrate more autonomous than dependent behaviors in late supervision sessions. Results of the Chi Square for the in-person trainee = 12.98 with a significance level of p=.0003. Results of the Chi Square for the distance trainee = 13.28 with a significance level of p=.0003. Both the in-person and distance trainees demonstrated significantly more Enjoy Friendly Autonomy behaviors than Friendly Accept behaviors in late clinical supervision sessions. This finding is consistent with what was hypothesized.

Hypothesis 1.c. stated that Trainee's in both in-person and distance conditions will become less dependent over time. Results of the Chi Square for the in-person trainee = .12 with a significance level of p=.729. Results of the Chi Square for the distance trainee = .43 with a significance level of p=.5119. This finding contradicts the hypothesis. Hypothesis 1.d. stated that trainee's in both in-person and distance conditions will become more autonomous over time. Results of the Chi Square for the in-person trainee

were not determinable due to low cell number. Results of the Chi Square for the distance trainee = .57 with a significance level of p=.4503. This finding contradicts the hypothesis.

Table 1

Chi Square Results for Trainee Behaviors Within Condition of Supervision

Variable	X^2	df	p value
Early FA and EnFA			
In-Person Trainee	6.78	1	.0092*
Distance Trainee	4.30	1	.0381*
Late FA and EnFA			
In-Person Trainee	12.98	1	.0003*
Late Distance Trainee	13.28	1	.0003*
Early FA and Late FA			
In-Person Trainee	.12	1	.7290
Distance Trainee	.43	1	.5119
Early EnFA and Late EnFA			
In-Person Trainee	und	1	und
Distance Trainee	.57	1	.4503

Note. EcFA=Encourage Friendly Autonomy, EnFA=Enjoy Friendly Autonomy, FA=Friendly Accept, FI=Friendly Influence, und=undeterminable, *p<.05.

Hypothesis 1.e. stated that in both in-person and distance conditions, the supervisor's behaviors will be more directive than collegial in early supervision sessions. Results of the Chi Square for the supervisor during in-person sessions = 4.68 with a significance level of p=.0305. Results of the Chi Square for the supervisor during distance sessions = 2.35 with a significance level of p=.1253 (see Table 2, p. 68). The supervisor demonstrated significantly more Encourage Friendly Autonomy behaviors than Friendly Influence behaviors during early in-person clinical supervision sessions.

This finding was in the opposite direction than hypothesized. No statistical significance was found in early distance sessions.

Hypothesis 1.f. stated that in both in-person and distance conditions, the supervisor's behaviors will be more collegial than directive in late supervision sessions. Results of the Chi Square for the supervisor during in-person sessions = 9.44 with a significance level of p=.0021. Results of the Chi Square for the supervisor during distance sessions cold not be determined due to low cell number. The supervisor demonstrated significantly more Encourage Friendly Autonomy behaviors than Friendly Influence behaviors during late supervision sessions in the in-person condition. This finding was consistent with the hypothesis. No statistical significance was found in the distance condition.

Hypothesis 1.g. stated that in both in-person and distance conditions, the supervisor's directive behaviors will decrease over time. Results of the Chi Square for the supervisor during in-person sessions = 0 with no determinable significance level. Results of the Chi Square for the supervisor during distance sessions = 3.42 with a significance level of p=.0644. No statistical significance was found for the hypothesis.

Table 2

Chi Square Results for Supervisor's Behavior Within Condition of Supervision

Variable	X^2	df	p value
Early FI and Early EcFA			
In-Person	4.68	1	.0305*
Distance	2.35	1	.1253
Late FI and Late EcFA			
In-Person	4.72	1	.0021*
Distance	und	1	und
Early FI and Late FI			
In-Person	0.00	1	und
Distance	3.42	1	.0644
Early EcFA and Late EcFA			
In-Person	.68	1	.4096
Distance	.01	1	.9203

Note. EcFA=Encourage Friendly Autonomy, EnFA=Enjoy Friendly Autonomy, FA=Friendly Accept, FI=Friendly Influence, und=undeterminable, *p<.05.

Hypothesis 1.h. stated that in both in-person and distance conditions, the supervisor's collegial behaviors will increase over time. Results of the Chi Square for the supervisor during in-person sessions = .68 with a significance level of p=.4096. Results of the Chi Square for the supervisor during distance sessions = .01 with a significance level of p=.9203. No statistical significance was found for the hypothesis.

Hypothesis 1.i. stated that trainees' behaviors will not differ between in-person and distance conditions. Chi Square for trainee Friendly Acceptance behaviors in early supervision sessions = 2.82 with a significance level of p=.0931. Chi Square for trainee Enjoy Friendly Autonomy behaviors in early supervision sessions = 1.32 with a significance level of p=.2506. Results of the Chi Square for trainee Friendly Acceptance

Behaviors in late supervision sessions = 1.92 with a significance level of p=.1659. Chi Square for trainee Enjoy Friendly Autonomy behaviors in late supervision sessions = 4.41 with a significance level of p=.0357 (see Table 3, p. 69). No statistically significant differences were found between condition of supervision and trainee Friendly Acceptance behaviors in early and late supervision sessions as hypothesized. No statistically significant differences were found between condition of supervision for Enjoy Friendly Autonomy behaviors among trainees in early supervision sessions as hypothesized. A statistically significant difference was found for the distance trainee who demonstrated more Enjoy Friendly Autonomy behaviors than the in-person trainee in late supervision sessions. This finding is in the opposite direction than hypothesized.

Table 3

Chi Square Results for Trainee Behaviors and Supervisor's behavior Between Condition of Supervision

Variable	X^2	df	p value
Trainee FA			
Early Distance and Early In-person	2.82	1	.0931
Late Distance and Late In-Person	1.92	1	.1659
Trainee EnFA			
Early Distance and Early In-person	1.32	1	.2506
Late Distance and Late In-Person	4.41	1	.0357*
Supervisor FI			
Early Distance and Early In-person	3.20	1	.0736
Late Distance and Late In-Person	13.56	1	.0002*
Supervisor EcFA			
Early Distance and Early In-person	.68	1	.4096
Late Distance and Late In-Person	.19	1	.6629

Note. EcFA=Encourage Friendly Autonomy, EnFA=Enjoy Friendly Autonomy, FA=Friendly Accept, FI=Friendly Influence, *p<.05.

Hypothesis 1.j. stated that the supervisor's behaviors will not differ between in-person and distance conditions. The results of the Chi Square for supervisor Friendly Influence behaviors in early supervision sessions = 3.2 with a significance level of p=.0736. The results of the Chi Square for supervisor Encourage Friendly Autonomy behaviors in early supervision sessions = .68 with a significance level of p=.4096. The results of the Chi Square for supervisor Friendly Influence behaviors in late supervision sessions = 13.56 with a significance level of p=.0002. The results of Chi Square for supervisor Encourage Friendly Autonomy behaviors in late supervision sessions = .19 with a significance level of p=.6629. No statistically significant differences were found between condition of supervision for supervisor Encourage Friendly Autonomy behaviors in early and late sessions as hypothesized. No significant differences were found between condition of supervision for supervisor Friendly Influence behaviors in early sessions as hypothesized. There was a statistically significant difference found for supervisor Friendly Influence behaviors in late distance sessions.

Sequential Analysis

Hypothesis 2 stated that trainees' behaviors will be predictable from the supervisor's behaviors more than conversely in both the in-person and distance mediums of communication. Table 4 (p. 71) presents the results of the parallel dominance tests. As shown in the table, z-scores and significance levels are reported for supervisor to trainee behaviors. These z-scores take into account the aggregate of behaviors across all four

sessions observed for each dyad. Positive z scores indicate that the trainee responses were predictable from the supervisor's responses and negative scores indicate that

Table 4

Sequential Analysis – Parallel Dominance for Transitions from Supervisor to Trainee

Transitions	Z score	Kappa t	p value
In Person			
EcFA to EnFA	-1.579	-.15	.057
EcFA to FA	.364	und	.359
FI to FA	.749	.11	.227
FI to EnFA	-.975	und	.165
Distance			
EcFA to EnFA	-2.856	-.24	.002*
EcFA to FA	.895	und.	.185
FI to FA	1.644	.19	.050*
FI to EnFA	-1.256	-.37	.105

Note EcFA=Encourage Friendly Autonomy, EnFA=Enjoy Friendly Autonomy, FA=Friendly Accept, FI=Friendly Influence, und=undeterminable, *p<.05, Positive z score values represent supervisor dominance while negative values represent trainee dominance.

the supervisor responses were predictable from the trainee responses. The transformed kappa (kappa t) values range from –1 to 1 for each interaction transition and reflect the degree of interaction pattern. The larger the kappa t value the greater the extent of the interaction pattern.

When looking at the supervisor's Friendly Influence behaviors followed by the trainees' Friendly Accept behaviors, the supervisor was found to be dominant, yet there

was significance found in the distance dyad only. In this case, the supervisor's Friendly Influence behaviors were dominant due to the distance trainee's Friendly Acceptance behaviors were more predictable from them. This pattern occurred reliably and 19% of the maximum extent possible.

In the distance condition the trainee was found to be more dominant than the supervisor when she lead with Enjoying Friendly Autonomy behaviors and the supervisor followed with Encouraging Friendly Autonomy behaviors. This transition from trainee to supervisor was not found to be statistically significant in the in-person supervision dyad. In this case the distance trainee's Enjoy Friendly Autonomy behaviors significantly predicted the supervisor following with Encourage Friendly Autonomy Behaviors. This pattern occurred reliably and 24% of the extent possible.

Inter-rater Reliability

Distance session nine was coded using the Structural Analysis of Social Behavior (SASB) by two trained raters to establish an estimate of inter-rater reliability. The weighted kappa of Cohen (1968) was selected in determining the reliability between raters. This test of inter-judge agreement utilizes an event-by-event method and is extremely conservative (Benjamin, 2000). Benjamin (2000) suggested that if a researcher is presenting data that involve studying the sequence of one event following another (i.e., sequential analysis), then a "fine-grained" analysis such as determining weighted kappa is mandatory. In this study, a weighted kappa value of .98 was obtained with distance session 9. This weighted kappa value was interpreted in terms of a z-score computed by

dividing kappa itself by the standard deviation of kappa. The corresponding z-score is 27.48 which is significant at the $p<.001$ level.

Structured Interview Question Analysis

The participants were asked questions during an exit interview as outlined in Appendix D. Given the structured nature of the interviews, the results will be presented following the outline in the interview questionnaire. The names of each participant have been changed to provide confidentiality. The supervisor will be called Sam. The trainee involved in the in-person supervision will be called Katy. The trainee involved in the distance supervision will be called Jennifer.

Question #1: Describe briefly what you personally sought to achieve by participating in clinical supervision, independent of the formal goals for this type of supervision. This question was posed to the two trainees.

Jennifer reported gaining a different perspective in her approach to counseling, increasing knowledge and identifying strengths as well as weaknesses, and identifying what theoretical approach she was operating from when conceptualizing clients. Katy reported wanting a new/different perspective from the supervisor, learning more about herself as a counselor, and examining how clients affect her personally.

Question #2: I'd like you to comment on some concepts with regard to the clinical supervision sessions (a) the presence and intimacy of the relationship, (b) the emotional climate, and (c) the quality of the relationship.

Jennifer reported her past experience in using the distance technology during meetings with many people in the same room. Her experience in the current one-on-one use of the technology was described as having greater intimacy since she was able to focus on only one individual. She also commented on enjoying personal control over the camera zoom and voice volume features, stating that this contributed to the climate for an intimate experience with clinical supervision.

In responding to the emotional climate she stated "I would not say that it is devoid of emotion." Jennifer went on to explain that this experience was not dissimilar to her previous semester in which she had in-person supervision. She related an experience in the final distance supervision session in which she felt sad and that the relationship was described as being "right there . . . it seemed very, very close." She went on to relate that she thought she was just as open emotionally as she was last semester with in-person supervision. Jennifer related that she did not experience anxiety over using the technology and she thought this was due to her past experience in using the technology during program meetings at the university.

The in person trainee, Katy responded to the parts of this question by describing events in which she expressed emotions during supervision sessions. She described an instance of feeling frustrated and anxious with a client over his perceived resistance. Her supervisor asked her how she was feeling right then and she valued the opportunity to express her feelings. Katy related another experience in which she was feeling sadness

during supervision and was able to talk about this with her supervisor and felt that it was easy to express her emotions with her supervisor. She described feeling safe in the supervision sessions and valued the supervisor being "straightforward." She admitted that she held back in the first couple of sessions while she was getting to know her supervisor. She acknowledged him providing a safe "environment," in which she could easily "open up" her feelings and express them.

Sam had the unique opportunity to be involved in both conditions and his responses reflect this dual participation. While he stated that the level of intimacy was comparable in both conditions he mentioned "I think I felt somewhat more intimacy in the in-person relationship than I did in the distance. Just the presence of the other person in the room seemed to make a difference but it's hard to quantify and hard to characterize, really." Further contemplating the differences, Sam related, "on the television screen there is some loss of information . . . the person doesn't look as close nor as clear. And so it is subtle facial expressions that are lost. You do not see the person's whole body as much, so some of the gestures and body language are not there." When questioned further about how the presence or intimacy changed as the weeks progressed, Sam acknowledged feeling some anxiety over using the distance technology initially because it was "new and unfamiliar." As the weeks progressed, Sam reflected on how he became more relaxed in using the technology. In speaking to the emotional climate of the relationships, Sam related that "it just seemed there was more distance, less of being able to gauge how things were going (in the distance condition), being able to feel like I had a clear picture of what was going on with her." In summarizing the experiences, Sam stated "I felt like the quality of the relationship was better in person but

it was viable over the internet. It wasn't a bad experience. It wasn't that I felt like she was getting inadequate supervision. But I'd say the quality was a little higher in person."

Question #3: On the basis of any negative experiences described above, did the parties do anything to compensate for this? If so, what?

Jennifer reported that there were no negative experiences as listed above but that there were two instances in which the videoconference technology was not working and she and the supervisor compensated by using the phone for their session. Sam, in speaking about these phone instances, stated "We were able to make things work but there's an even greater loss of information over the phone, and the internet was somewhere in between talking on the telephone and being in-person." Katy denied the occurrence of any negative experiences.

Sam described a negative experience as having difficulty judging what Jennifer was getting out of the sessions initially. He implemented an idea to compensate for this loss by having Jennifer (and Katy) write descriptions of how each session went for them. They were encouraged to write about what they were able to take away from each session. Jennifer would submit this to Sam via e-mail and Katy would write in a notebook and submit this to him. Jennifer stated "I do think the emails were good." She went on to discuss that this helped her understand what she was getting out of each session and felt that her supervisor could understand what she was, and was not, getting from the sessions. Jennifer saw this as a great enhancement of the supervision over what she received the previous semester.

Question #4: Do you believe that a supervisor or supervisee should have particular qualities or abilities to conduct clinical supervision satisfactorily? If so, what?

From the trainee's perspective, Jennifer responded that trainees have to be open to talking about their experiences with clients and be open to constructive criticism. Jennifer stated that a trainee or supervisor would have to feel comfortable with using the videoconferencing equipment, as well. Katy responded to this question by stating that trainees have to be open to receiving feedback and be willing to ask for what they want from the supervisor.

From the supervisor's perspective, Sam stated "I can't say so." He went on to describe someone with a supervisory style who may be more comfortable using the distance technology, "I think for supervisors that tend to have a more didactic style and are less concerned with the relationship and the interpersonal dynamics it would be less of a concern or barrier doing it over the internet." Sam thought that trainees should posses a willingness to be open and engage in the process of supervision in either condition. He stated "I feel like both of these students were open and willing to engage and it made it nice to work with them for that reason."

Question #5: Can practical arrangements (technical, room/furnishings, organization of sessions) add to your satisfaction with clinical supervision? If so, what?

Sam responded to this question with regard to the distance sessions preferring to have the lights in the room where he was located dim so as to cut down on the glare of the television screen. He also questioned if a smaller room would have contributed to a greater sense of felt-intimacy. Jennifer's response was similar, "I think a smaller room is

better . . . it just seems maybe that you're closer when you're in a smaller room." Both Sam and Jennifer were in large conference rooms for the duration of the semester. Each university campus houses the distance technology in large rooms since the primary use for the equipment is during meetings with multiple members at each end communicating at a distance.

Katy did not have a suggestion other than commenting on how she enjoyed the chairs in the supervision room. There was an instance in which the room they regularly used was scheduled for another appointment and they conducted supervision in a room containing large comfortable couches. Katy expressed a dislike of this and preferred to be sitting upright without slouching during supervision sessions.

Question #6: Do you feel as if this interview has enabled you to give a good description of your experiences and attitudes about clinical supervision? Are there other issues that you believe should be included in this study?

Jennifer suggested that it would be good for the trainee participating in videoconference supervision to meet his/her supervisor in person initially. Jennifer and Sam did not meet each other outside of using videoconference, phone, and e-mail communication. Sam related an instance in which Jennifer stated that she would like to meet him in person and he replied that he felt the same way.

Katy responded affirmatively to the interview allowing her to express how the process of supervision went for her. She reiterated the value she placed on the supervision she received during the semester stating, "Last semester I dreaded it . . . but

now I definitely cherish it." Katy continued with, "it has been an excellent experience for me . . I actually seek out supervision now and I think I will in the future."

Sam responded by expressing two issues that he described as difficult to separate. The first issue related to the difference in types of clients each of the trainees were seeing. Jennifer was in a community mental health setting and Katy was in a university counseling center. Sam discussed the issue of Jennifer seeing clients with more psychopathology than those Katy was working. The second issue concerned processing countertransference issues with each of the trainees. He stated "In person it was easier to deal with countertransference issues with Katy and there wasn't the urgency or the feeling of urgency to discuss cases." "You (new trainee working with less severe psychopathology) know what to do technically with cases. With Jennifer, I think the distance made it a little bit harder to discuss countertransference issues, but then also her case load" (was different). Sam was speaking to the more structured environment of the distance format and his feeling of needing to provide more direction on specific cases for Jennifer. He found himself dealing with the business of therapy with Jennifer more than the interpersonal reactions a counselor may feel in the process of psychotherapy. Sam wondered if this difference was related more to the types of clients being seen by the trainees or with utilizing the distance technology. He reported that he could not comment definitively on this.

Summary

This chapter presented the results of the quantitative statistical analyses and the qualitative analysis performed on the data obtained from the research. To summarize, Hypotheses 1.b. was supported in that the in-person and distance trainees demonstrated significantly more Enjoy Friendly Autonomy behaviors than Friendly Accept behaviors in late clinical supervision sessions. Hypothesis 1.f. was partially supported in that the supervisor during late distance sessions responded with significantly more Encourage Friendly Autonomy Behaviors. Hypothesis 1.i. was partially supported in that there wee no significant differences in trainee behaviors between condition of supervision with respect to trainee Friendly acceptance behaviors in early and late sessions as well as trainee Enjoy Friendly Autonomy behaviors in early sessions. Hypothesis 1.j. was partially supported by no significant difference in supervisor behaviors of Encourage Friendly Autonomy in early and late sessions as well as Friendly Influence supervisor behaviors in early sessions. Hypotheses 1.a., 1.c., 1.d., 1.e., 1.h. were not supported. Hypothesis 2 was partially supported. The supervisor was found to be statistically dominant in the distance condition only. There was no specific hypothesis associated with research question 3, yet interesting qualitative data informing the practice of clinical supervision was obtained. Chapter V presents the discussion of results, limitations, and recommendations.

CHAPTER V

DISCUSSION, LIMITATIONS, AND RECOMMENDATIONS

This chapter presents a discussion of the results of this study following the outlined hypotheses as presented in Chapter II. Limitations of this study, as well as recommendations for future research, are also included in this chapter.

Discussion

In 1997, Sampson et al., called for research addressing the development of relationships via distance technology. Since that time, there have been few published research articles investigating distance psychotherapy and clinical supervision. The purpose of this research was to enhance the understanding of clinical supervision as conducted in person and at a distance. The results of this study were in line with Day (2002), Janoff & Schoenholtz (1999), Gammon et al. (1998), and Glueckauf, Whitton, Baxter, Kain, Volgelgesang, Hudson, & Wright (1998) reports of similar findings in the process of videoconference versus in-person relationships. The current study revealed a relative few significant differences in the process of clinical supervision when measuring interpersonal behaviors of the supervisor and trainees in distance and in-person conditions. This finding lends further support to Russell (1996) who found no significant

difference between traditional classroom and technologically mediated learning across 231 studies from 1949 to 1996. Further discussion of each identified research question follows.

Hypotheses 1.a. through 1.d.

Hypotheses 1.a. through 1.d. were formulated from the developmental literature as presented in Chapter II, which stated that beginning trainees are dependent on their supervisor and lacking in confidence. These trainees demonstrate a need to be advised, guided, reassured, and given positive feedback (Stoltenberg, et al., 1998). Collectively, these attributes were considered trainee dependence. Trainee dependence was measured by Friendly Acceptance behaviors as specified by the SASB (Benjamin, 1981). As trainees progress through supervision, they develop and evolve with more confidence as professionals and behave with more autonomy. Trainee autonomy was measured by Enjoy Friendly Autonomy behaviors as specified by the SASB.

Results from this study found statistically significant Enjoy Friendly Autonomy behaviors in early and late supervision sessions across both conditions. This trainee behavior appears to be consistent across the semester of clinical supervision. Rather than beginning with more dependence and becoming more autonomous, these trainees began with a significant level of autonomy and increased their level of autonomy as the semester progressed. This finding lends partial support for the Integrated Developmental Model (IDM) of supervision for beginning trainees.

The observed trainee behaviors in this study as described above can be explained by the IDM of clinical supervision. The student practitioners in this study were participating in their second semester of practicum and would be considered as Level 1 trainees in the IDM. The IDM model describes advanced Level 1 trainees as becoming less openly dependent on their supervisors (Stoltenberg et al., 1998). While there were significantly greater autonomous behaviors among both trainees throughout the semester, there was the consistent presence of dependence behaviors. This pattern of a consistent yet limited degree of dependence with significant proportion of autonomy held strong throughout the semester. The consistency of dependence behaviors demonstrated by the trainees in each condition is understood as an aspect of the conflict of retaining dependency versus acting more autonomous among advanced trainees as described by the IDM. Advanced Level 1 trainee autonomous behaviors, as described by the IDM, capture the essence of what was observed with dependence versus autonomous behaviors in this study.

One disadvantage of the IDM is that there are not clear delineations between the differing levels of trainee development. The authors describe a fluid transition from each level to the next and discourage a rigid classification system of professional growth (Stoltenberg, et al., 1998). Level 1 trainees do, however, demonstrate more dependence than autonomy while Level 3 trainees demonstrate almost entirely autonomous and negligible dependency behaviors. Toward the end of Level 1, trainees become less dependent on the supervisor. Provided the supervisor has structured the supervision sessions in a way for the trainee to succeed with interventions, the new therapist will strive for autonomous functioning.

Both in-person and distance trainees demonstrated patterns of interpersonal interaction consistent with the advanced developmental Level 1 of the IDM in possible preparation for a transition to Level 2. The pattern of interaction among each of the trainees held in a consistent manner throughout the semester long relationship. No clear differences in interaction pattern were found, possibly lending support for the IDM authors' suggestion of no clear delineation from one level to the next.

Hypotheses 1.e. through 1.h.

Hypotheses 1.e. through 1.h. were formulated from the developmental literature as presented in Chapter II, which suggests that supervisors should provide structure and incorporate directives with beginning trainees (Stoltenberg et al., 1998). These supervisor behaviors were collectively considered as directive for this study. Supervisor directiveness was measured by Friendly Influence behaviors as specified in the SASB (Benjamin, 1981). As trainees develop, the IDM suggests that supervisors interact on a more collegial/consultative level with trainees as they develop. This suggestion includes supervisors sharing more than in earlier sessions and remaining cognizant of the possible need to balance some additional directiveness with consultation. This change in supervisor behavior was collectively termed as collegial. Supervisor collegiality was measured by Encouraging Friendly Autonomy behaviors as specified in the SASB.

The results of these hypotheses were not supported by the data. The supervisor was not found to exhibit significantly more directive behaviors in early supervision sessions. In fact results were in the opposite direction than hypothesized for supervisor

behaviors. The supervisor responded with a significant amount of Encourage Friendly Autonomy, or collegial, behaviors during early supervision sessions for the in-person condition only. Supervisor collegial behavior increased and remained statistically significant in later in-person sessions. As for the distance condition, the supervisor responded with a significant amount of directive behaviors in late sessions with no significant difference in early sessions.

These findings lend partial support to the IDM in that the supervisor utilized some directiveness yet encouraged a significant amount of autonomy with the in-person trainee. No significant difference could be found between supervisor directiveness and collegiality with the distance trainee in early sessions, while he was significantly directive in later sessions with this trainee.

During his exit interview, the supervisor, indicated the difficult type of clients the distance trainee was working with and how he thought there was a need to focus more on the process of therapy with her than with the in-person trainee. This could possibly account for the observation of proportionally more supervisor Friendly Influence behaviors in late distance sessions. The in person trainee had clients with less severe pathology and presumably was doing well with her clients so the supervisor responded with a significant amount of Encourage Friendly Autonomy behaviors across the semester. While there were no significant differences found through statistical analysis, differences were reported by the supervisor during the structured interview.

A decision to frame this finding in the theory of IDM is based in the supervision environment of the advanced Level 1 trainee. In this environment, the IDM suggests that supervisors should allow more latitude for the trainee in making decisions regarding

behavior in the counseling sessions while the supervisor becomes more of a reference than an advisor. The IDM for supervision environment reminds us of the importance in remembering that the trainee is struggling with dependency during the latter stage of Level 1 development. It is suggested that the supervisor be prepared to instruct the trainee in new skills and to give advice at times, while providing structure for the supervision experience (Stoltenberg et al., 1998). Stoltenberg (1981) suggests the supervisor be sensitive and empathize to stay attuned to the needs of the trainee. This supervisory process is suggested to instill confidence leading to more autonomous trainee behaviors.

Hypotheses 1.i. through 1.j.

Hypotheses 1.i. through 1.j. were based on current research findings concerning the use of distance and in-person training, education, and counseling relationships. These research findings suggest that distance relationships are similar to in-person relationships (Day, 2002; Janoff & Schoenholtz, 1999; Gammon et al., 1998; and Glueckauf, Whitton, Baxter, Kain, Volgelsgang, Hudson, & Wright, 1998). The presence of significantly different behaviors among the trainees and supervisor was investigated between the two conditions of supervision.

The results demonstrated no statistically significant differences among trainee dependence behaviors in early and late supervision sessions between in-person and distance conditions. In addition, the in-person trainee and distance trainee responded with no significant differences in autonomous behaviors in early supervision sessions. Each trainee responded with a similar proportion of autonomous behaviors (70%) in later

supervision sessions, yet the distance trainee was found to respond with significantly more autonomous behaviors than the in-person trainee. A variable not investigated in this study may account for this difference. During the four twenty-minute observations of the in-person dyad there were 205 transitions in speaking turns while in the distance condition there were 252. There were a greater number of verbal exchanges between the supervisor and trainee in the distance condition in the observed sessions indicating brief statements of the participants in the distance condition when compared to the in person condition. With a greater number of back-and-forth communication, the distance trainee had more opportunities to demonstrate autonomous behaviors in later supervision sessions.

The results demonstrated no statistical difference in the supervisor's collegial behaviors between the conditions of supervision in early and late sessions as hypothesized. In addition, supervisor directive behaviors did not significantly differ in early supervision sessions between the conditions. The supervisor responded with significantly more directive behaviors with the distance trainee than the in-person trainee in later supervision sessions.

In the IDM, the supervisor is called on to balance guidance with setting the stage for more autonomy among trainees in the advanced stage of Level 1 (Stoltenberg et al., 1998). The supervisor in this study expressed his thoughts about providing more guidance with the distance trainee due to the type of clients she was seeing. He stated that due to the more severe pathology among clients the distance trainee was seeing, there were more opportunities to be directive with what the trainee was doing in her therapy. The supervisor related that this was not the case with the in-person trainee, who was

working in a university counseling center and seeing clients with less severe pathology. This account from the supervisor could explain finding significantly more directive behaviors with the distance trainee in later supervision sessions.

Hypothesis 2

Hypothesis 2 stated that a trainee's behaviors will be predictable from the supervisor's behaviors more than conversely in both the in-person and distance mediums of communication. Dominance was found in different ways than was hypothesized. As demonstrated in Table 4 (p. 70), statistical significance with dominance was found in the distance sessions only. Supervisor dominance reached statistical significance when leading with Friendly Influence behaviors followed by the trainee's Friendly Acceptance behaviors in the videoconference condition only. Trainee dominance reached statistical significance when leading with Enjoy Friendly Autonomy behaviors followed by the supervisor's Encourage Friendly Autonomy behaviors in the distance dyad only.

The fact that the supervisor dominance reached statistical significance in the distance relationship and not in the in person sessions calls for some interpretation. As noted in the discussion of the previous hypothesis, the supervisor explained that in the supervision of the distance trainee, he had more opportunities to be directive with her work as a function of the more severe pathology in clients she was counseling. He went on to note that the in-person trainee was experiencing clients with less severe pathology and did not require as much direction. The supervisor was found to be dominant when leading with influencing types of behaviors with the distance trainee who would, in turn,

respond with accepting behaviors. Given the information regarding types of clients being seen and the IDM suggested behavior of supervisors for Level 1 trainees, the supervisor dominance found in the distance relationship is expected. This was the only supervisor behavior that reached statistical significance for dominance and this was found only in the videoconference condition.

Interestingly, in the distance dyad, the trainee was found to be statistically dominant when leading with Enjoying Friendly Autonomy and the supervisor following with Encourage Friendly Autonomy. This finding lends further support of the IDM advanced Level 1 in which the trainee is striving for more autonomy and the supervisor is allowing for more independence. Given the complex nature of the clients being served by the distance trainee, the supervisor was expected to balance directing with allowing for autonomy and this process is illuminated by the data gathered with this supervision dyad. When this trainee would show some striving for autonomy, the supervisor was flexible and allowed her the space to lead in that direction.

In these observed sessions, the dominance behaviors that reached statistical significance followed the predictive principal of complimentarity as suggested by the Structural Analysis of Social Behavior (SASB). “Two individuals are in complementary positions if their focus is on the same person and if their behaviors can be coded at the same interpersonal space” (Benjamin, 1996). Complementary sequences involve exchanges of different behaviors that “fit together” (Haley, 1963, p. 11 as cited in Clairborn and Lichtenberg, 1989), such as asking for advice and giving advice, giving instructions and following instructions, expressing sadness and offering comfort. In the supervision dyads, the focus was on the trainee and the coded behaviors were in the same

interpersonal space. This finding provides further support for the concept of complimentarity as suggested by Benjamin.

Hypothesis 3

Based on the researcher's prior qualitative study on distance supervision, it was expected that the supervisor and trainee involved in the distance format would experience a process of adaptation in accounting for the physical absence of the other.

The participants in this study reported the level of intimacy in the videoconference relationship was enhanced over time. These accounts are consistent with those reported in the qualitative investigation of videoconference clinical supervision relationships previously conducted by this principal investigator. These findings are further supported by the qualitative investigation of videoconferencing clinical supervision conducted by Gammon et al., (1998). Increasing time utilizing the videoconference technology in clinical supervision is reported to enhance a sense of the other and intimacy in the relationship.

The participants revealed additional information during the structured interviews that can inform practice guidelines of distance clinical supervision. Included in the suggestions were parameters for the participants initially meeting in person, allowing time for becoming comfortable with the technology, and compensating for negative events in distance clinical supervision sessions.

The research design included in this study did not allow for the distance dyad to meet in person. The supervisor and the distance trainee expressed a desire to meet each

other in person. This request was consistent with past research utilizing this technology (Gammon et al., 1998; Janoff & Schoenholtz, 1999) and is specified by Kanz (2001) in his recommendations for conducting online clinical supervision. There are consistent anecdotal reports in the literature of requests for meeting in person before engaging in a distance videoconference relationship. Therefore, clinical supervision conducted at a distance through videoconferencing technology would presumably be enhanced if the participants could meet in person prior to beginning the videoconference relationship or at some point in the distance relationship.

Each of the trainees involved in this study expressed a sense of the presence of and intimacy with their relationship with the supervisor. The distance trainee compared her experience to using the same technology previously in group meetings. She expressed a greater sense of intimacy and closeness with her clinical supervisor than when conferencing with a larger group on either end of the videoconference feed. The in-person trainee described intense emotions she expressed over the semester and related how the supervisor was there for her throughout these feelings. She expressed how the supervisor's behavior contributed to her sense of intimacy in the relationship.

The supervisor spoke to the differences in intimacy between the two conditions of clinical supervision. While he stated that the level of intimacy was comparable in both conditions, he mentioned feeling greater intimacy with the in-person trainee. He explained this difference as being largely due to presence of the other person in the room. He summarized the videoconference clinical supervision as viable and the in-person supervision as higher quality.

The presence of negative events in clinical supervision was greater in the videoconference condition than the in-person condition. There were two occasions in which the participants were unable to establish a videoconference connection or some aspect of the technology was not working properly. These occasions were reported by the distance trainee and the supervisor as negative events. During these times, the distance dyad compensated by using a telephone for the supervision sessions. During this time the supervisor reported an even greater loss of information from which to gauge how the trainee was doing. The distance trainee expressed that the telephone communication was not as effective or intimate as the videoconference sessions. The distance dyad expressed no other negative events and the in-person dyad reported no negative events over the semester.

Limitations

There are limitations to be acknowledged when considering the results of this research. This study is limited in the ability to generalize the results to other supervision dyads. This is largely due to the intensive single subject research design incorporated in this study. Generalizing the results to others involved in videoconference supervision is not possible. This study must be replicated with larger samples of supervisors and trainees in order to provide support for the validity of the findings. However, qualitative researchers have established the term transferability for discussing the application of single subject research.

Transferability is a process in which individual readers of this research can take aspects of the findings provided and transfer them to their own instances of clinical supervision. Readers may infer that the research would be the same or similar in their own situation. Eisner (1998) states, "if we learn something about a case that we did not know at the outset of the study, not only have we achieved consciousness of that quality or feature, but we also look for that quality or feature in other places (p. 132)."

The readers of this research will determine if the findings can be transferred to what they do in clinical supervision. From a qualitative point of view, transferability is primarily the responsibility of the one doing the generalizing. Trochim, (2002) suggests the researcher can enhance the transferability of results through description of the research context and the assumptions central to the study. The person who wishes to transfer the results to a different context is then responsible for making the judgment of how sensible the transfer is by taking into consideration the specific details of the study, such as the cross gender pairing of supervisor and trainees.

This study did not include an investigation of sex effects. The intensive single subject research design limited the ability to include same- and cross-sex pairings for clinical supervision. One objective of this study was to limit the individual differences of trainees by matching them on sex. This decision has implications when considering the male gender of the supervisor and female sex of the trainees included here. Research findings point to conflicting results of same-sex and cross-sex supervision dyads (McCarthy, Kulakowski, & Kenfield, 1994; Behling, Curtis, and Foster, 1988; Thyer, Sower-Hoag and Love, 1988; Putney, Worthington, and McCullough, 1992).

This study was limited by the differences in previous and current experiences of the trainees. Effort was made to match the trainees on a number of variables as described earlier in this study. Despite this effort there were differences among the trainees. The trainees differed in clients they were seeing in psychotherapy sessions. The distance trainee had a client caseload considered to be made up of persons with more severe pathology than the in-person trainee had in her client load. In addition, the distance trainee had past experience with videoconference technology having participated in faculty meetings that utilized the same equipment incorporated in this research. These differences may have impacted the results obtained in this research.

The Structural Analysis of Social Behavior coding scheme is perhaps too comprehensive for the specific type of interaction involved with clinical supervision. There were many codes included in this system that were not utilized due to the behaviors evidenced in the interaction between the supervisor and trainees. A specific clinical supervision coding scheme may capture the process of trainee development more completely. Researchers interested in the process by which trainees become competent professionals could create a coding scheme specifically relevant to clinical supervision. This could enhance the methodological investigation of trainee development.

Recommendations for Future Research

There are a number of recommendations for future research in the area of videoconference clinical supervision. The replication of these results with larger samples of supervisors and trainees of both genders is recommended to enhance our knowledge

and understanding of the differences between in-person and distance relationships. While there were no statistical differences in interpersonal behavior of the participants in this study, they expressed definite differences in their experience of using videoconferencing technology when compared to meeting in person.

Further research could clarify the differences in relationships conducted solely by video conferencing versus meeting in person. One difference observed, yet not included in the research questions, is the number of transitions in speaking turn from supervisor to trainee. During the four twenty-minute observations of the in-person dyad there were 205 transitions in speaking turns while in the distance condition there were 252. It is possible that when meeting by videoconference the participants are significantly more brief in their verbal interactions. An alternate explanation could include that in distance relationships the participants are more task oriented. This potential difference could be investigated more completely with further research.

Expanding the time in which supervision dyads are observed could help enhance our understanding of trainee development. The interpersonal behavior of the participants in this study were rather consistent across the semester. Extending the observations of trainee interpersonal behavior across semesters, and even years, could clarify the development of trainees across levels of the IDM.

Summary

This chapter reviewed the discussion of each hypothesis discussed the limitations of the study and included recommendations for future research in this area.

The most salient finding of this study lies with the interpersonal process of supervision. Largely the same interpersonal process occurred in each condition observed in this study. The significant differences can be accounted for by the difference in types of clients being served by the individual trainees. This research demonstrates a similar interpersonal and developmental process between videoconference and in-person clinical supervision. While there are hurdles to overcome in utilizing this type of distance technology, it is a viable option for the training of competent clinical practitioners in the fields of counseling and psychology.

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Appendix A

Informed Consent for Research Participants

You are invited to participate in a research study to better understand the developmental process of clinical supervision provided in-person and at a distance. The name of the study is "An Intensive Single Subject Investigation of Clinical Supervision: In-Person and Distance Formats." Participation in this study would involve you meeting with a faculty supervisor for individual supervision via interactive videoconferencing or in-person for the entire spring semester. Your supervision sessions will be audiotaped. Participation in this study will involve completing a questionnaires regarding your past experience with supervision and technology as well as supervisory level. The questionnaires will be completed prior to your selection for participation in the actual study. Finally, you will be involved in an interview after the completion of the semester to describe your experience with clinical supervision.

Completing these questionnaires will typically take no longer than 15 to 20 minutes and the interview no longer than 90 minutes. Possible benefits of this study include increased awareness and understanding of the developmental process of supervisee's. We hope the results of this study will provide important information regarding how supervision should be conducted using interactive videoconferencing. There are no foreseeable risks of participating in the study.

Your participation in this study is completely voluntary. There is no penalty for refusal to participate, and you are free to withdraw consent and participation in the project at any time without penalty.

All of the information you provide is strictly confidential. The videoconferencing, signals are not stored and therefore pass through the telecommunications network point-to-point, disappearing just like audio signals in telephone conversations. Confidentiality of the video transmission is further protected in that if anyone were to break in to the transfer they would automatically become one of the endpoints simultaneously ending you session with your supervisor. The audiotaped supervision sessions will be handled with the strictest confidentiality. Tapes will only be observed, by the researcher and research assistants, for the effect of supervision in each modality and **not** for your performance evaluations.

If you have any questions about this study, you can contact the researchers of this study, Teresa Bear, Ph.D., and Adam McCracken, M.A., School of Applied Health and Educational Psychology, 2435 Main Hall Tulsa, Oklahoma State University at (918) 594-8516. You may also contact Sharon Bacher, IRB Executive Secretary, 202 Whitehurst Oklahoma State University at (405) 744-5700. Thank you for your interest in this project. We genuinely appreciate your participation in this study.

I have read and fully understand the consent form. I sign it freely and voluntarily.

Date: _____ Time: _____ (a.m./p.m.)

Signed: _____

Informed Consent for Research

Appendix B

Demographic Data Sheets for Supervisor and Trainees

Supervisor Data Sheet

Name: _____

Age: _____

Sex: _____

Race: (You can check more than one box if this describes your race)

- ☐ African American/Black
- ☐ American Indian/Native American
- ☐ Asian/Asian American
- ☐ Hispanic/Latino(a)
- ☐ White, non-Hispanic
- ☐ Other: _____

Number of semesters or half years you have supervised _____

How much do you believe in and adhere to the following therapeutic orientations and their techniques?

	Not at all						Greatly
Behavioral and /or Cognitive	1	2	3	4	5	6	7
Humanistic and/or Experiential	1	2	3	4	5	6	7
Psychoanalytic and/or Dynamic	1	2	3	4	5	6	7

How would you rate yourself in terms of supervisory experience?

1 2 3 4 5 6 7

---

inexperienced very experienced

How would you rate yourself in terms of supervisory competence?

1 2 3 4 5 6 7

---

incompetent extremely competent

Describe prior experiences with videoconferencing technology:

Describe briefly below what you feel are the salient needs for beginning counselors:

Trainee Data Sheet

Name: _____ Instructor: _____

Age: _____ No. years in program: _____

Sex: _____

Race: (You can check more than one box if this describes your race)

- ☐ African American/Black
- ☐ American Indian/Native American
- ☐ Asian/Asian American
- ☐ Hispanic/Latino(a)
- ☐ White, non-Hispanic
- ☐ Other: _____

How much do you believe in and adhere to the following therapeutic orientations and their techniques?

	Not at all						Greatly
Behavioral and /or Cognitive	1	2	3	4	5	6	7
Humanistic and/or Experiential	1	2	3	4	5	6	7
Psychoanalytic and/or Dynamic	1	2	3	4	5	6	7

How would you rate yourself in terms of experience as a counselor?

1 2 3 4 5 6 7

---

inexperienced very experienced

How would you rate yourself in terms of competence as a counselor?

1 2 3 4 5 6 7

---

incompetent extremely competent

Describe prior experiences with videoconferencing technology:

Describe briefly below what you feel are your most critical need in supervision this semester:

Appendix C

Supervisory Level Questionnaire-Revised

Supervisee Questionnaire

In terms of your own current behavior, please answer the items below according to the following scale as explained previously.

1: NEVER
2: RARELY
3: SOMETIMES
4: HALF THE TIME
5: OFTEN
6: MOST OF THE TIME
7: ALWAYS

1. I feel genuinely relaxed and comfortable in my counseling/therapy sessions.
   NEVER ALWAYS
   1 2 3 4 5 6 7

2. I am able to critique counseling tapes and gain insights with minimum help from my supervisor.
   NEVER ALWAYS
   1 2 3 4 5 6 7

3. I am able to be spontaneous in counseling/therapy, yet my behavior is relevant.
   NEVER ALWAYS
   1 2 3 4 5 6 7

4. I lack self confidence in establishing counseling relationships with diverse client types.
   NEVER ALWAYS
   1 2 3 4 5 6 7

5. I am able to apply a consistent personalized rationale of human behavior in working with my clients.
   NEVER ALWAYS
   1 2 3 4 5 6 7

6. I tend to get confused when things don't go according to plan and lack confidence in my ability to handle the unexpected.
   NEVER ALWAYS
   1 2 3 4 5 6 7

7. The overall quality of my work fluctuates; on some days I do well, on other days, I do poorly.
   NEVER ALWAYS
   1 2 3 4 5 6 7

8. I depend upon my supervisor considerably in figuring out how to deal with my clients.
   NEVER ALWAYS
   1 2 3 4 5 6 7

9. I feel comfortable in confronting my clients.
   NEVER ALWAYS

1 2 3 4 5 6 7

10. Much of the time in counseling/therapy, I find myself thinking about my next response, instead of fitting my intervention into the overall picture.
NEVER ALWAYS
1 2 3 4 5 6 7

11. My motivation fluctuates from day to day.
NEVER ALWAYS
1 2 3 4 5 6 7

12. At times, I wish my supervisor could be in the counseling/therapy session to lend a hand.
NEVER ALWAYS
1 2 3 4 5 6 7

13. During counseling/therapy sessions, I find it difficult to concentrate because of my concern with my own performance.
NEVER ALWAYS
1 2 3 4 5 6

14. Although at times I really want advice/feedback from my supervisor, at other times I really want to do things my own way.
NEVER ALWAYS
1 2 3 4 5 6 7

15. Sometimes the client's situation seems so hopeless, I just don't know what to do.
NEVER ALWAYS
1 2 3 4 5 6 7

16. It is important that my supervisor allow me to make my own mistakes.
NEVER ALWAYS
1 2 3 4 5 6 7

17. Given my current state of professional development, I believe I know when I need consultation from my supervisor and when I don't.
NEVER ALWAYS
1 2 3 4 5 6 7

18. Sometimes I question how suited I am to be a counselor/therapist.
NEVER ALWAYS
1 2 3 4 5 6 7

19. Regarding counseling/therapy, I view my supervisor as a teacher/mentor.
NEVER ALWAYS
1 2 3 4 5 6 7

20. Sometimes I feel that counseling/therapy is so complex, I will never be able to learn it all.
NEVER ALWAYS
1 2 3 4 5 6 7

21. I believe I know my strengths and weaknesses as a counselor sufficiently well to understand my professional potential and limitations.
NEVER ALWAYS
1 2 3 4 5 6 7

22. Regarding counseling/therapy, I view my supervisor as a peer/colleague.

NEVER						ALWAYS
1	2	3	4	5	6	7

23. I think I know myself well and am able to integrate that into my therapeutic style.

NEVER						ALWAYS
1	2	3	4	5	6	7

24. I find I am able to understand my clients' view of the world, yet help them objectively evaluate alternatives.

NEVER						ALWAYS
1	2	3	4	5	6	7

25. At my current level of professional development, my confidence in my abilities is such that my desire to do counseling/therapy doesn't change much from day to day.

NEVER						ALWAYS
1	2	3	4	5	6	7

26. I find I am able to empathize with my clients' feelings states, but still help them focus on problem resolution.

NEVER						ALWAYS
1	2	3	4	5	6	7

27. I am able to adequately assess my interpersonal impact on clients and use that knowledge therapeutically.

NEVER						ALWAYS
1	2	3	4	5	6	7

28. I am adequately able to assess the client's interpersonal impact on me and use that therapeutically.

NEVER						ALWAYS
1	2	3	4	5	6	7

29. I believe I exhibit a consistent professional objectivity, and ability to work within my role as a counselor without undue over involvement with my clients.

NEVER						ALWAYS
1	2	3	4	5	6	7

30. I believe I exhibit a consistent professional objectivity, and ability to work within my role as a counselor without excessive distance from my clients.

NEVER						ALWAYS
1	2	3	4	5	6	7

Appendix D

Interview Guide

1. Describe briefly what you personally sought to achieve by participating in clinical supervision, independent of the formal goals for this type of supervision.

2. I'd like you to comment on some concepts with regard to the clinical supervision sessions?
   (a) describe the presence and intimacy of the relationship
   (b) describe the emotional climate
   (c) describe the quality of the relationship

3. On the basis of any negative experiences above, did the parties do anything to compensate for this? If so, what?

4. Do you believe that a supervisor or supervisee should have particular qualities or abilities to conduct clinical supervision satisfactorily? If so, what?

5. Can practical arrangements (technical, room/furnishings, organization of sessions) add to your satisfaction with clinical supervision? If so, what?

6. Do you feel as if this interview has enabled you to give a good description of your experiences and attitudes about clinical supervision? Are there other issues that you believe should be included in this study?

Appendix E

Institutional Review Board Approval Form

Oklahoma State University
Institutional Review Board

Protocol Expires: 12/13/02

Date: Friday, December 14, 2001 IRB Application No ED0258

Proposal Title: AN INTENSIVE SINGLE SUBEJCT INVESTIGATION OF CLINICAL SUPPERVISION: IN PERSON AND DISITANCE FORMATS

Principal Investigator(s):

Adam McCracken
437 Willard
Stillwater, OK 74078

Teresa Bear
2435 Main Hall
Tulsa, OK 74106

Reviewed and Processed as: Expedited

Approval Status Recommended by Reviewer(s): Approved

Dear PI :

Your IRB application referenced above has been approved for one calendar year. Please make note of the expiration date indicated above. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved projects are subject to monitoring by the IRB. If you have questions about the IRB procedures or need any assistance from the Board, please contact Sharon Bacher, the Executive Secretary to the IRB, in 203 Whitehurst (phone: 405-744-5700, sbacher@okstate.edu).

Sincerely,

Carol Olson, Chair
Institutional Review Board

VITA

James Adam McCracken

Candidate for the Degree of

DOCTOR OF PHILOSOPHY

Dissertation: AN INTENSIVE SINGLE SUBJECT INVESTIGATION OF CLINICAL SUPERVISION: IN-PERSON AND DISTANCE FORMATS

Major Field: Educational Psychology: Counseling Psychology

Biographical:

Personal Data: Born in Louisville, Kentucky, on February 20, 1970, the son of Keith and Sue McCracken. Adam is married to Renee McCracken and they have two sons Colin and Evan.

Education: Graduated from Lake Howell High School, Orlando, Florida in May 1988; earned Bachelor of Arts degree from the University of Central Florida, Orlando, Florida in May 1993; earned Master of Arts degree from the University of Central Florida, Orlando, Florida in December 1997; completed the requirements for the Doctor of Philosophy degree with a major in Educational Psychology: Counseling Psychology in December, 2004.

Experience: Currently a Psychology Fellow with Park Place Behavioral Health Care with an emphasis in child and adolescent psychotherapy. Completed and internship in clinical psychology with Park Place Behavioral Health Care. Adam has worked in a variety of settings including community mental health, substance abuse, and university counseling. He has provided mental health treatment to children, adolescent, and adults in individual, couples, family, and group settings. He has served as the assistant director of a counseling psychology clinic, clinical supervisor of a large inpatient adolescent unit, supervised students in mental health training programs, and assisted in teaching many different masters level training courses. He has participated in research involving adolescent expression of anger as it relates to attachment with parents and peers as well as using videoconferencing technology in the clinical supervision of mental health practitioners.

Professional Membership: Student member of the American Psychological Association; Student member of the Society of Clinical Child and Adolescent Psychology (Division 53, American Psychological Association).

Name: James Adam McCracken Date of Degree: December, 2004

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: AN INTENSIVE SINGLE SUBJECT INVESTIGATION OF CLINICAL SUPERVISION: IN-PERSON AND DISTANCE FORMATS

Pages in Study: 115 Candidate for the Degree of Doctor of Philosophy

Major Field: Educational Psychology

Scope and Method of Study: The purpose of this study was to measure the interpersonal behaviors of a supervisor and trainees participating in clinical supervision meeting in-person and at a distance with videoconferencing technology. Under investigation was a semester-long supervisory relationship between two supervision dyads. All sessions of each supervision dyad were audiotaped and an independent rater coded 20 minutes (10-30) of sessions 3, 5, 9, and 11 utilizing the Structural Analysis of Social Behavior (SASB) coding system. Frequencies of coded behaviors were used to demonstrate evidence of the Integrative Developmental Model (IDM) of supervision in both conditions. The frequencies were also used to investigate differences in behaviors of the participants between conditions of clinical supervision. Additionally, evidence of dominance in the supervisory relationship was measured through sequential analysis of the coded behaviors. Finally, structured interviews were conducted with each participant to gather information about the process of clinical supervision provided in-person and at a distance.

Findings and Conclusions: Chi Square analyses of frequency in behaviors evidenced partial support for the IDM of clinical supervision. The trainees began with a significant level of autonomy in early meetings and increase their level of autonomy in later supervision sessions. The supervisor adjusted the balance of directive and collegial behaviors to meet the needs of trainees. Save for one significant difference, the trainees and supervisor demonstrated similar behaviors between in-person and distance conditions. Supervisor dominance reached statistical significance in the distance dyad only. The structured interview analysis revealed individual differences in the process of clinical supervision between in-person and distance sessions.

ADVISOR'S APPROVAL: Steven W. Edwards