The Pennsylvania State University

The Graduate School

College of Education

COMPUTER MEDIATED COMMUNICATION AND ONLINE COUNSELING

RELATIONSHIP DEVELOPMENT

A Thesis in

Counselor Education

by

Lynn M. Atanasoff

© 2003 Lynn M. Atanasoff

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

August 2003
The thesis of Lynn M. Atanasoff has been reviewed and approved* by the following

Brandon B. Hunt
Associate Professor of Rehabilitation Services
Thesis Advisor
Chair of Committee

Edwin L. Herr
Distinguished Professor of Education

Spencer G. Niles
Professor of Counselor Education

Janice C. Light
Professor of Communication Sciences and Disorders

Robert B. Slaney
Professor of Counseling Psychology
Head of the Department of Counselor Education, Counseling Psychology, and Rehabilitation Services

*Signatures are on file in the Graduate School.
ABSTRACT

Seventy-six Counselor Education doctoral students rated the degree to which text-based computer mediated communication (CMC) counseling exchanges had therapeutic relationship qualities. The participants read either a treatment or alternate treatment counseling scenario posted on the World Wide Web and then rated the scenarios on the strength of a working alliance and relational communications of intimacy. There was a significant difference found between the groups indicating that it was not the medium itself that defined the quality of the counseling relationship, but rather the counseling scenario that study participants read. Participants' perceptions about e-mail technology were a significant covariate. Implications of this study for counseling online and counselor education along with future research directions are discussed.
# TABLE OF CONTENTS

LIST OF FIGURES .................................................................................................................. vii

LIST OF TABLES ...................................................................................................................... viii

ACKNOWLEDGEMENTS .......................................................................................................... ix

CHAPTER 1: INTRODUCTION ............................................................................................... 1

Research About Online Counseling ................................................................................. 4
Research on Communication within Business Settings .................................................. 6
Research and Theory about the Counseling Process and Relationship ...................... 10
Summary of Current Research ......................................................................................... 15

CHAPTER 2: LITERATURE REVIEW .................................................................................. 19

Attitudes Toward Computers and Computer Technology .............................................. 19
CMC Socioemotional Content ......................................................................................... 34
  Lack of social cues ......................................................................................................... 35
  Social presence ............................................................................................................. 44
  Media richness ............................................................................................................ 50
  Socioemotional content .............................................................................................. 55
  Summary ...................................................................................................................... 63
Relational Communication ............................................................................................... 64
  Relational dimensions ............................................................................................... 64
  Relational view of CMC ............................................................................................. 72
  Summary ...................................................................................................................... 82
The Therapeutic Relationship ......................................................................................... 83
  The working alliance ................................................................................................. 84
  Counselor assumptions .............................................................................................. 91
Counseling Online .......................................................................................................... 97
  Online studies summary ............................................................................................ 109

CHAPTER 3: METHOD ........................................................................................................... 115

Participants ...................................................................................................................... 115
Sampling Procedure for Participants .......................................................................... 117
Procedure ....................................................................................................................... 122
APPENDIX D: RELATIONAL COMMUNICATION SCALE - INTIMACY ..........242

APPENDIX E: PERCEIVED USEFULNESS AND EASE OF USE SCALE ..........248

APPENDIX F: COUNSELOR THEORETICAL POSITION SCALE ..................251

APPENDIX G: TREATMENT AND ALTERNATE TREATMENT INTERACTION SCENARIOS ..............................................................261
LIST OF FIGURES

FIGURE 1: BOXPLOT OF TOTAL UNADJUSTED AND TOTAL ADJUSTED SCORES ON USEFULNESS/EASE OF USE SCALE.........................................................173

FIGURE 2: SCATTERPLOT OF TOTAL UNADJUSTED AND TOTAL ADJUSTED SCORES FOR ALL PARTICIPANTS............................................................174
LIST OF TABLES

TABLE 1: SEX AND RACE DESCRIPTION .................................................................175

TABLE 2: AGE AND EXPERIENCE DEMOGRAPHICS .............................................176

TABLE 3: DESCRIPTIVE STATISTICS FOR ALL INSTRUMENTS ..................................177

TABLE 4: MULTIVARIATE EFFECTS SUMMARY ....................................................178

TABLE 5: UNIVARIATE INTERACTION EFFECTS SUMMARY .....................................179

TABLE 6: CORRELATIONS AMONG ALL INSTRUMENTS ........................................180
ACKNOWLEDGEMENTS

There are many people who helped make this dissertation possible that I would like to thank. First my gratitude goes to Pam, Ethan, and Emma who continually help me keep my achievements in perspective. Second, many thanks go to my dissertation chair, Brandon Hunt, who was supportive and available without fail, and to my committee members, Ed Herr, Skip Niles, and Janice Light, who were always helpful and accessible as I worked on this project. Finally, I want to acknowledge the professionals who helped in the development of the materials for this study and who helped with technical consultation: Jerry Trusty, Mike Burns, Peggy Lorah, Jhan Doughty, Amy Milsom, Stacie Robertson, Jen Grzegorek, Azy Barak, Craig Childress, Yevette Colon, John Suler, Lawrence Murphy, and Dan Mitchell.
CHAPTER 1
INTRODUCTION

Even though electronic forms of communication are reported to facilitate client-counselor relationship development (Ainesworth, 2000), the use of a computer mediated counseling process is experimental. In recent years, several professional organizations in the field of counseling have outlined ethical guidelines about Internet-based counseling (American Counseling Association, 1999; American Psychological Association, 1997; National Board for Certified Counselors, 1999). No doubt these ethical guidelines were prompted by the growing use of Internet-mediated counseling by an increasing number of counseling professionals (Powell, 1998).

The salient issue, however, is that there is minimal empirical evidence to support the effectiveness of computer mediated communication (CMC) for counseling making the practice ethically questionable. For ethical practice of computer mediated counseling, each of the different modalities of CMC available on the Internet (e.g., electronic mail [e-mail], bulletin board systems, text-based virtual reality system, real time chat room) require examination in terms of their merits and potential threats to ethical counseling behavior (Shapiro & Schulman, 1996). Despite the lack of ethical explicitness or empirical investigation of the medium's effectiveness, there is documentation that counseling services are currently performed using Internet forms of communication (Barak, 1999; Sampson, Kolodinsky, & Greeno, 1997; Shapiro & Schulman, 1996). As one example, there are various web sites (e.g., queendom.com, mytherapynet.com, mentalhealth.net, brain.com, etherapy.net) that offer counseling referrals to the public along with online counseling services through e-mail and chat room formats with the
majority of these services being delivered through electronic mail (Barak, 1999). Yet, studies
done on telehealth or telepsychiatry\footnote{The terms telehealth and telepsychiatry refer to the delivery of health and psychiatry services over distances by using technology.}, such as by Day\cite{Day1999} or Rabasca \cite{Rabasca2000}, have not
included online, text-based, computer-mediated counseling interactions. Similarly, the majority
of counseling services are often delivered only through electronic mail, yet the only researchers
who consider text-based interaction \cite{BarakWander-Schwartz1999} do not reflect the
asynchronous \textit{i.e.}, nonsimultaneous) communication pattern that is characteristic of e-mail. As
such, there is a lack of attention to the most frequent mode of online counseling services,
asynchronous and text-based systems.

Traditionally, counselors are trained to facilitate face-to-face interactions. The practice
of counseling refers to "the application of mental health, psychological, or human development
principles, through cognitive, affective, behavioral or systemic intervention strategies, that
address wellness, personal growth, or career development, as well as pathology" \cite[American
Counseling Association 1997, Professional Counseling section, ¶ 1]{AmericanCounselingAssociation1997}. The professional
counselor is a practitioner who has a specialty that "is narrowly focused, requiring advanced
knowledge in the field founded on the premise that all Professional Counselors must first meet
the requirements for the general practice of professional counseling" \cite[American Counseling
Association 1997, Professional Counseling section, ¶ 1]{AmericanCounselingAssociation1997}.

There is empirical evidence about the efficacy of traditional face-to-face counseling for
addressing mental health concerns \cite[U. S. Department of Health and Human Services, 1999]{USDepartmentofHealthandHumanServices1999}.\footnote{The terms telehealth and telepsychiatry refer to the delivery of health and psychiatry services over distances by using technology.}
Likewise, there seems to be a growing trend in offering text-based, electronic services (e.g., Powell, 1998), but the increase in practice is occurring without understanding how an online medium facilitates or impacts the counseling process that results in therapeutic outcomes. These circumstances are problematic, ethically and clinically, since the process and outcomes of text-based, individual counseling online are uncertain, and what qualifies counselors to include online work in their scope of practice is vague. Moreover, it is noteworthy that because most individual online counseling is text-based (e.g., Grohol, 1998) and such interaction comes for a fee (e.g., Shapiro & Schulman, 1996), research about the delivery of counseling from a distance using computer-based systems has not examined the most commonly used medium of asynchronous, text-based, online counseling (e.g., Powell, 1998).

It seems fundamental and essential to investigate how the facilitative relationship that forms the foundation of individual counseling work is communicated and developed through text via electronic modes of communication. Some authors argue that it is not possible to develop a therapeutic relationship necessary for counseling through text-based, computer mediated interactions because of the assumed impersonal nature of such interactions (e.g., Janney, 1996; Smith, 1997). Since the heuristic work of Carl Rogers (1957), a number of studies have provided evidence that there are specific relationship conditions that are necessary to create an environment from which the counseling process evolves. The ability of counselors to facilitate a bond often comes from a show of care and warmth, but the ability to develop such a bond with their clients through CMC interactions needs investigation (Barak, 1999).

Nevertheless, there are a growing number of counselors whose scope of practice now includes online counseling (Grohol, 1998). Since the viability of electronic interaction as a
counseling medium is uncertain, it is critical to ask how perceptible something as essential to the counseling process as the development of a therapeutic relationship is when communication happens through a text-based, computer-mediated format.

There are various areas within the literature that are pertinent to the empirical and theoretical discussion of online, text-based counseling relationship development. Specifically, these areas, which are discussed below, include current research about online counseling, research on communication within business settings, and research and theory about the counseling process and relationship.

*Research About Online Counseling*

Traditionally, the creation of the counseling relationship occurs through a series of face-to-face communications between counselor and client because, as with any relationship, the basis is communication (Kiesler, 1973). Communication is the means used to establish goals, tasks, and relational bonds that lead to a therapeutic process. While various forms of communication are used to establish a therapeutic relationship, the predominant form, face-to-face interaction, is rich with verbal (e.g., speech) and nonverbal (e.g., gestures, expressions) forms of communication. Opponents of computer mediated counseling purport that without the rich and varied forms of face-to-face interaction it is not possible to do counseling because of an absence of information (e.g., Smith, 1997).

Some research, however, brings into question whether the ideal of a physical presence is the only way to develop a client-counselor working alliance or for a therapeutic process to develop. For example, in a controlled study by Schneider (1999), treatment outcome was similar when comparing face-to-face, video teleconference, and audio only communication,
and all three were better than no treatment. The data from the study by Schneider (1999) were also analyzed qualitatively and reported by Day and Schneider (1999). Videotapes of the face-to-face, video teleconference, and audio only communication conditions were rated by observers, and there were no differences in working alliance ratings across conditions (Day & Schneider, 1999). The researchers reported that the findings uphold the idea that emotional connection is possible with technological mediation, and highlights the ability of client and therapist to adjust to other modes of delivery (Day & Schneider, 1999).

Although the research by Schneider (1999) and Day and Schneider (1999) provided some evidence for using technology to counsel at a distance, the modes of communication examined by them did not include text-based interactions. In contrast, Barak and Wander-Schwartz (1999) conducted an experiment that compared face-to-face, chat room, and no treatment conditions to demonstrate evidence of group development through a text-based chat room (i.e., real time). They found that the chat room group was similar to face-to-face interaction with respect to group cohesiveness, personal exposure, expression of feelings, independence, and organization (Barak & Wander-Schwartz, 1999). Although these studies address non-traditional forms of counseling interactions, they do not capture the asynchronous, or nonsimultaneous, nature of the majority of text-based online counseling that is delivered through bulletin board systems or electronic mail (Grohol, 1998).

One exception to the paucity of research about asynchronous communication is a pilot study that reports therapeutic factors in group work (Weinberg, Uken, Schmale, & Adamek, 1995). Using self-report measures, six members of a breast cancer support group reported the therapeutic factors of group work defined by Yalom (1995), including instillation of hope,
universality, cohesion, and catharsis, through text based bulletin board interaction (Weinberg et al., 1995). Such findings seem consistent with the data by Ainesworth (2000) that clients find asynchronous, text-based contact helpful and that a meaningful relationship can develop. Like Weinberg et al. (1995), there are additional writings on Internet-based self-help. For example, there are documented exchanges on a bulletin board devoted to suicide (Miller & Gergen, 1998), sexual abuse survivors (Eaton, Abeles, & Gutfreund, 1988; Finn & Lavitt, 1994), and people recovering from addictions (King, 1994), as well as exchanges on an electronic newsgroup used for supporting women with eating disorders (Winzelberg, 1997). Although there is evidence of self-help groups being conducted using various online technologies, it is difficult to determine therapeutic effects because of the self-help nature of the interactions. What is missing from the research is what happens during a counseling dyadic interaction, which constitutes the majority of text-based, online counseling (Grohol, 1998; Powell, 1999). Nevertheless, the therapeutic potential for counseling relationship development is suggested in research that is not specific to counseling, but rather is in the field of communication within business settings.

*Research on Communication within Business Settings*

Though it seems reasonable to anticipate that the counseling relationship could be communicated through CMC, research on the quality of relationship development using CMC has not been specific to counseling relationships. Initial research on CMC was conducted with the assumption that CMC fosters impersonal relationships, so CMC theories and research were initially developed for the study of business management based on psychological theories.
applied to organizational behavior (e.g., Sproull & Kiesler, 1986). Such research suggested that there is a narrow "bandwidth" of communication when using CMC (e.g., Daft & Lengel, 1986).

The term “bandwidth” is used to describe the number of communication channels or cues available during interaction, and includes modes such as verbalizations, body language, facial expression, and tone of voice in face-to-face interaction. By contrast, CMC may only include text as a channel. The “bandwidth” idea suggests that the multiple routes of face-to-face communication have a wide bandwidth because of the many channels available, and CMC has a narrow “bandwidth.” This is analogous to the difference between the wider bandwidth of information transmitted by a television signal compared to a narrow radio transmission. In other words, the absence of nonverbal cues in CMC was predicted to result in qualitatively inferior social relationships, an appealing thought for managers who want their employees “on task,” and not socializing (e.g., Daft & Lengel, 1984; Kiesler, Siegel, & McGuire, 1984).

Joseph Walther (1992) contended that it was the research designs used in early studies (e.g., Kiesler et al., 1984), instead of a bandwidth phenomena, that were responsible for findings that CMC patterns of communication are impersonal, because some studies showed social-emotional communications in CMC (e.g., Hellerstein, 1985; Phillips, 1983; Rice & Love, 1987). It is important to realize that in the studies showing socioemotional communications, the researchers were attempting to study how people stay focused on work tasks. From this framework the by-product of social and emotional communication was a distraction that developed spontaneously.

Given the seemingly inevitable development of socioemotional communications, Walther (1992) proposed that people use any medium, including CMC, to develop a
socioemotional connection. Along with this idea are the notions that people seek other people with whom to affiliate, and that CMC follows the same process of interpersonal impression development as face-to-face interactions. According to Walther (1992), the same socioemotional interaction patterns that happen during face-to-face speech can happen through an adaptive process during CMC, although "how" someone writes becomes more salient than "what" is written. Specifically, there are different ways to write that denote the social context in which people use written text. For example, while some writing is formal using correct grammar (e.g., journal articles), other writing is informal using simpler sentence formats (e.g., a note passed between friends in the hall). What Walther (1992) suggested is that people have the ability to modify, or adapt, their written language to serve a social and emotional purpose within a CMC context. Hence, when people use CMC, the same socioemotional motivation exists, but they must get acquainted and form impressions of one another using information conveyed in text.

Since its inception as an alternate explanation, the social information processing theory proposed by Walther (1992) has been tested for the validity of its propositions. Evidence provided by various studies (Walther, 1992, 1993, 1996; Walther, Anderson, & Park, 1994; Walther & Burgoon, 1992) supports the idea that qualitatively similar relational communications form when comparing face-to-face and CMC groups, especially when the amount of time for relationship development is not restricted.

It is interesting to consider that the studies conducted using either a "bandwidth" or a social information processing perspective all address relationship development in business settings for business-related tasks (e.g., Walther et al., 1994; Walther & Burgoon, 1992), yet
participants' communications consistently developed to include the social realm of relating. As Walther (1996) noted, "there are several instances in which CMC has surpassed the level of affection and emotion of parallel face-to-face interaction" (p. 17). For instance, in one study raters considered three person CMC groups as having more intimate interaction than face-to-face counterparts (Walther, 1996). What makes this relevant to counseling is not the fact that employees can include relational dimensions in work setting interactions, but rather that the socioemotional nature of human interaction can be relayed through CMC. What if the focus of one's work is socioemotional in nature, as is the situation with counseling?

Historically, the focus of CMC research has been on the confining or limiting nature of having a narrow "bandwidth" in CMC compared with face-to-face communication. Theoretically, however, it is possible that the absence of cues, such as facial expressions and gestures, can intensify initial CMC interactions. Without the full range of information that people use to form social impressions, the CMC context can create a heightened, or "hyperpersonal," exchange (Walther, 1996). This is the case since people represent themselves, as well as construct their understanding of others, based solely on text without interference from face-to-face cues (e.g., racial information, personal attractiveness). Walther (1996) cites instances when selective information can maximize interpersonal effect, and explains how intimate and intense interactions can happen through asynchronous CMC (Walther, 1996). These interactions are distinguishable by relational communication factors such as involvement, trust, receptivity, and rapport. This begs the question, what is the quality of relational communication when a counseling relationship is the basis of interaction?
Walther and colleagues (Walther, 1992, 1993, 1996; Walther, Anderson, & Park, 1994; Walther & Burgoon, 1992) consider a relational view of communication, which allows for an interpersonal process that differs from viewing CMC by a “bandwidth” view only. Interestingly, opponents to online, text-based counseling currently make the argument that text-based interaction is limiting in comparison to the multiple channels available with face-to-face interactions. Yet, it is reasonable to expect that another form of communication could provide a medium that enhances the social and emotional foundation of the counseling relationship when communication partners shift their expectations to a new form of communicating (Childress & Asamen, 1998; Day & Schneider, 1999).

*Research and Theory about the Counseling Process and Relationship*

Although there is documentation that people seek and receive psychological support using text-based CMC, the data provide no information about fundamental relationship development when using CMC (Barak, 1999; Sampson et al., 1997). It seems reasonable to expect that CMC could mediate the dyadic client-counselor relationship, however, research about relationship development through CMC is not representative of the type of communications that occur during counseling. Likewise, counseling process research completed specific to counseling relationship development assumes that counseling is completed using traditional face-to-face communication. So, the question remains, is the relationship necessary for counseling to proceed a relationship that can be communicated through an asynchronous, text-based, CMC medium? To answer this question it is important first to define what process research is, and second to describe briefly the constructs studied in the history of process research.
Counseling process research can be defined as the study of human didactic communication (Kiesler, 1973). According to Hill (1982, 1991), as its aim, process research involves answering what happens in the counseling session or treatment, showing change in client within-session behavior, or linking process to outcome. The research includes descriptive, correlational, and experimental studies that attempt to capture how client change occurs in the counseling process (Hill, 1982, 1991).

Although theory to explain how client change occurs is present throughout counseling history, the emphasis on empirically testing counseling process variables only began in the 1950s with Carl Rogers' highly researched client-centered approach to counseling that focused on the provision of empathy, unconditional regard, and therapist congruence in face-to-face counseling (Rogers, 1957). According to Rogers (1957), empathy, regard, and congruence were qualities to be communicated by the counselor to the client. Although these core conditions are not sufficient to explain all client change, there is evidence that some of the variance for client change can be attributed to empathy in particular (Patterson, 1984). Research on the facilitative conditions provides evidence that the conditions are necessary but not sufficient to explain client change (Gelso & Hayes, 1998). The construct of empathy, however, overlaps with an important element of counseling relationship formation, the working alliance, which is a variable of interest in the current research (Bordin, 1979; Gelso & Carter, 1994).

As the research on counseling process has evolved, the conditions of empathy, warmth, and genuineness remain difficult constructs to define (Barkham, 1988), but they have guided researchers to consider an interaction pattern rather than emphasizing only counselor supplied variables (Gelso & Carter, 1994; Gelso & Hayes, 1998). Interestingly, the importance of a
client and counselor collaboration is evident in early counseling theory proposed by Freud who identified that the first aim of treatment is the attachment between client and counselor (Freud, 1912, as cited in Gaston, 1990). Ideas from Freud, however, were not researched with empirical rigor, and even though the bond was mentioned, in his writings Freud focused on client distortions of therapists (Gaston, 1990). Even if Freud did not focus on the alliance directly, the importance of forging a collaborative relationship and an attachment bond have been highlighted as important variables to successful counseling outcomes throughout the history of counseling theory (e.g., Greenson, 1965, as cited in Gaston, 1990; Sterba, 1934, as cited in Gaston, 1990; Zetzel, 1956, as cited in Gaston, 1990).

The collaborative aspect of the counseling relationship continues to be a primary focus of counseling theory. Consistent across theories is the multidimensional construct of the working alliance. In a seminal work by Bordin (1979), the components of the working alliance were defined as the bond between client and therapist, an agreement on goals, and an agreement on tasks. The ongoing attempt to define the counseling relationship has continued since Bordin (1979), and more recently was articulated in works by Gelso and Carter (1985, 1994). Specifically, the most fundamental aspect of the counseling relationship according to Gelso and Carter (1994) is the working alliance, which is the alignment or joining of the client’s and therapist’s selves for the purpose of the work.

As has been theorized throughout the history of counseling, the working alliance must be in place if counseling is to proceed effectively or at all (Gelso & Carter, 1994; Tryon & Kane, 1993). The strength of the working alliance is effected by and affects the extent to which counselor and client agree on the goals of counseling work, concur on tasks useful in attaining
goals, and experience an emotional bond with each other (Gelso & Carter, 1994). In addition, the strength of the emotional bond determines how counseling dyads proceed through the counseling process (Gelso & Carter, 1994; Mallinckrodt, 1991).

As stated above, the emphasis of working alliance research has been on the interactions between counselor and client. Both the client and the counselor have roles in building and preserving an alliance, and the therapist’s attitudes and techniques contribute to an alliance (e.g., being available regularly and reliably, protective of therapy from interruptions) (Gelso & Hayes, 1998). There are also client contributions that play a role in the alliance (e.g., client attachment history, a desire to heal and grow). Most important, beyond the details of what factors come together to form an alliance is the notion that a “good enough” working alliance be established early in the counseling process for treatment to be effective. These are essentially the rudiments of collaboration and attachment that have to be in place within the first few sessions (Gelso & Hayes, 1998).

As stated above, process research initially was focused on variables (e.g., empathy) that dealt with counseling interview interactions. There is, however, another line of research that concentrated on what outcomes resulted from counseling. Essentially outcome research focused on the end result of counseling at therapy termination (Kiesler, 1971). Although these lines of research were regarded as separate and distinct research areas, Kiesler initiated the idea that the process-outcome distinction was somewhat misleading. Instead, he suggested that researchers investigating in-session changes ought to concern themselves with outcome, and researchers investigating outcome need to be aware of in-session changes. It has been argued that the alliance links therapy process and outcome since there is a reliable association between the
alliance and therapy outcome. There are various studies that substantiate how the counseling process is linked to the outcome, and how the alliance appears to be a bridge between process and outcome. As an example, over the course of therapy early measures of alliance (i.e., one to five sessions) are as predictive of outcome as are measures taken later in treatment (i.e., twenty to thirty sessions) (Horvath & Symond, 1991).

Given its fundamental nature, it seems reasonable to expect that a working alliance is necessary for counseling to proceed even when communication occurs in a text based, computer mediated environment. Further, if the alliance is present during CMC, then it should be detected early in the exchanges. Yet, it is not apparent if text-based CMC can have therapeutic qualities that distinguish therapeutic interactions from other social interactions or in what way the factors that come together to form an alliance reveal themselves in text.

Walther (1992) suggested that people adapt how they write to solicit relationships and present or reveal themselves socially using CMC, thereby reducing uncertainty and ambiguity (Walther, 1992). Interestingly, Murphy and Mitchell (1998) report that the development of a relationship for the purpose of "therap-e-mail" is mediated by verbal strategies intended to evoke a process similar to traditional therapy and circumvent there being no nonverbal cues that exist in e-mail. The authors, who practice "therap-e-mail," use strategies such as “textual visualization” or a “descriptive immediacy” to convey images that give a context for understanding words (e.g., if you were sitting beside me as I wrote this you would notice me falling against my chair while saying “wow”). Likewise, Murphy and Mitchell use what they term “emotional bracketing” for "therap-e-mail." With this approach the counselor tries to communicate the intent of a message. For example, “I haven’t heard from you (concern,
worry).” Hence, there are a variety of techniques that appear analogous to nonverbal cues that a counselor can use when using e-mail to circumvent cues typically given in face-to-face interaction. Such approaches exemplify the assumed quality of interactions that are possible through CMC.

**Summary of Current Research**

In summarizing the research, it is assumed that the development of a relationship and subsequent development of a working alliance is possible to communicate through text-based interactions that are intended to articulate the bond, tasks, and goals of computer mediated counseling. Furthermore, people can adapt the way they write in a CMC environment much like how they learn to adjust how they communicate using other technologies, such as audio-only or video-audio communications. There is reason to believe that CMC counseling has the potential to mediate interpersonal messages that will be high in relational dimensions early in the interactions. Moreover, the development of a working alliance should be apparent early in the relationship if it appears at all.

The question remains, however, how evident is the alliance when counseling occurs via CMC? Likewise, what is the quality of relationship promoting communication when a counseling relationship is the basis of interaction? To answer the questions, there are two additional factors that must be recognized.

First, there is a substantial proportion of mental health practitioners who are resistant or reluctant to use technology (Rosen & Weil, 1996, 1997). It is anticipated that clinicians’ perceptions of how useful technology-based counseling would be as a viable avenue for developing a working alliance in counseling is in some part influenced by clinicians’ views
about how useful and easy technology is to use. Hence, when considering the ratings of
counseling by CMC, it seems critical to ask about clinicians' attitudes toward technology.

Second, there are different assumptions that counselors make about what they consider
appropriate goals and tasks, as well as to what degree the counseling relationship is important
throughout counseling. Even though there is agreement that there are fundamental elements
needed for counseling to take place, it is suggested (e.g., Grohol, 1998) that using CMC for
counseling is in part influenced by what clinicians believe are acceptable counseling-related
tasks or interventions. Since pre-existing conceptualizations about acceptable interventions
vary depending on theoretical orientation (Poznanski & McLennan, 1999), it seems important
to ask what effect clinicians' theoretical orientation has on alliance ratings of CMC counseling.

To summarize, there are two research questions to be answered in the current study. The
questions are:

1. Do counselors perceive that a relationship having therapeutic qualities develops when
   client and counselor interactions are text-based and computer mediated?

2. What is the relationship between relational communication ratings of intimacy, the
   working alliance, clinician's assumptions about counseling, and clinicians' perceptions about
   e-mail usefulness/ease of use when counseling occurs by electronic mail?

Participant counselors read e-mail interaction scenarios that occurred in a counselor and
client dyad to determine if the counselors perceived that a relationship having therapeutic
qualities develops when counseling interactions were text-based and computer mediated. The
design was a between group design that used a post-test only with an alternate treatment group
condition. Participants were randomly assigned to one of two conditions, which included one treatment and one alternate treatment condition respectively.

The treatment condition required participants to read a scenario of an e-mail interaction between a counselor and a client. The treatment group scenario contained text interactions that were judged by experts to have a working alliance and intimacy communicated between the counselor and client. As an example, the treatment scenario included statements that indicated client and counselor agreement about what the client ought to get from counseling, as well as evidence that the counselor remained open to the client’s reactions. Study participants were asked to rate the scenario they read on the strength of the working alliance and the quality of intimacy relational communications, the dependent variables. In accordance with the research questions, participants also rated themselves on their perceptions about e-mail and assumptions that they have about counseling.

The second group, the alternate treatment scenario, functioned as a type of control group. By definition, a control group can receive either no treatment or an alternate treatment to that given the treatment group (Gall, Borg, & Gall, 1996). In the current research it was not possible to measure the dependent variables (i.e., working alliance, intimate relational communications) without having participants read e-mail exchanges. Therefore, the alternate treatment approach was used to gain some experimental control. As such, the alternate treatment group had to read an e-mail exchange scenario, which used the same number of words and sentences, paragraphs, and sentence structure as the treatment scenario. The absence of therapeutic quality and intimate relational communications differentiated the alternate treatment interaction scenario exchanges from treatment interaction exchanges. For example,
where the treatment scenario included statements that indicated client and counselor agreement about what the client ought to get from counseling, the alternate treatment scenario had no evidence that there was agreement about what the client ought to get. Likewise, instead of the counselor remaining open to the client’s reaction, as is the case in the treatment scenario, in the alternate treatment the consultant did not remain open to the client's reactions. Counselors in the alternate treatment group also completed measures of their attitudes toward e-mail technology and assumptions they had about counseling practices. For both groups, the sequence of the instruments was counterbalanced in their administration.
CHAPTER 2

LITERATURE REVIEW

The literature included in the current review includes empirical studies and descriptive articles from the following five areas of research: (a) attitudes toward computers, (b) CMC socioemotional content, (c) relational communication, (d) the therapeutic relationship, including the working alliance, and (e) counseling online. Each of the areas is discussed separately below.

Attitudes Toward Computers and Computer Technology

Online counseling involves computer technology, and people have different attitudes toward computers and computer technology. Therefore it is important to examine what researchers know about attitudes of counselors toward technology and to consider how attitudes toward computers is defined. There are various characteristics underlying mental health clinicians’ reactions toward the introduction of new technology. While some people are eager to adopt technology, others may be hesitant or resistant (Rosen & Weil, 1997, 1998). There is a distinction, however, to be made between the following closely related constructs: (a) anxiety, phobia, or aversion to computers or technology; (b) general attitudes toward computers; and (c) ease of use and perceived usefulness of technology. These distinctions are explained below in part to assist the reader in understanding how differently "attitudes toward technology" and "attitudes toward computers" are defined in the literature. Moreover, the overview serves to clarify the decision to select an instrument based on work done by Davis, Bagozzi, and Warshaw (1989). This review, therefore, emphasizes the constructs of perceived usefulness and ease of use given their importance to the current study.
First, with respect to anxiety, phobia, and aversion to computers, the research literature provides consistent definitions that underscore the negative reactions toward computers. This includes terms such as computer anxiety, cyberphobia, technophobia, computer resistance, and computer aversion or avoidance (e.g., Chua, Chen, & Wong, 1999; Weil, Rosen, & Wugalter, 1990). These terms are often defined as fear, apprehension, and phobia felt by people towards computer technology (Chua et al., 1999). According to a meta-analysis by Chua et al., the multidimensional construct can be viewed in terms of duration of anxiety (permanent or temporary), intensity of response (normal versus problematic), specificity of aversion (general or equipment specific), and level of involvement (e.g., direct use for learning versus observing others use computer).

Regardless of what dimensions are measured, there is consensus about the overarching effects of negative feelings associated with computers. Specifically, negative feelings cause computer use avoidance (Chua et al., 1999), can prohibit learning (e.g., McInerney, McInerney, & Sinclair, 1994), and can be changed with intervention (e.g., Weil, Rosen, & Sears, 1987). The unifying feature, however, of the anxiety-based terms is the negative or aversive nature of feelings that interfere to varying degrees with computer use for persons regardless of age, race, and gender (Chua et al., 1999; Dyck, Gee, & Smither, 1998).

The second construct, general attitudes toward computers, includes positive and negative feelings. According to some theorists (e.g., Kay, 1993; Ranier & Miller, 1996), a problem exists in agreeing upon the term "attitude toward computer technology" because it includes a number of different factors. As an example, some consider attitudes in a general sense (e.g., Kay, 1993) while others consider equipment specific attitudes (LaLomia &
Sidowski, 1989). There is likewise little theoretical justification behind most instruments that measure general attitudes toward computers (Kay, 1993; Ranier & Miller, 1996).

Although defined with variation across instrument developers, the construct of attitudes toward computers has surprising evidence of convergent validity among the various instruments when compared across a number of studies (Brock & Sulsky, 1994; Harrison & Rainer, 1992; Rainer & Miller, 1996; Woodrow, 1991; Zakrajsek, Waters, Popovich, Craft, & Hampton, 1990). What appears to differ among these instruments is the extent to which they emphasize cognitive, affective, and behavioral reactions, which are the broad factors that underlie the notion of attitudes toward computers.

In summary, attitudes toward computers include cognitive, affective, and behavioral factors as well as positive and negative reactions. The negative reaction factor is what makes the construct of attitudes toward computers overlap with computer anxiety. It is critical to understand, however, that for both computer anxiety and general attitudes toward computers, the findings are only applicable to personal or mainframe computers and the specific operations or software used with them. Neither construct emerged from the era of information technology. At present there are rapid shifts in technology, such as the relatively recent change from focusing on personal computers for word processing or spreadsheet applications to using computer technology to access communications or information transfer (e.g., e-mail, voice mail). Applying the constructs included in either computer anxiety or attitudes toward computers that were developed prior to the era of vast Internet use would be an imprecise application of either construct. This is an important point since online counseling involves Internet-based technology even though it is mediated by personal computers.
There are two inter-related constructs that bypass the problems inherent in either computer anxiety or general attitudes toward computer concepts for Internet-based technology. Specifically, the constructs are perceived usefulness and ease of use, which as explained more below are factors within a theoretical model called the Technology Acceptance Model (TAM). Given the changing nature of technology, it seems important to consider the full range of computer based technology that includes hardware and software as well as the type of tasks involved (Adams, Nelson, & Todd, 1992; Davis, 1989; Davis et al., 1989). Likewise, to account for user acceptance of or aversion to technology, there must be some unifying constructs that are fundamental determinants of an individual’s acceptance of computer based technology regardless of the variety of technology used (e.g., e-mail, voice mail, word processing, graphics) (Davis, 1989; Davis et al., 1989). Unlike the research on attitudes toward personal or mainframe computers, it is preferable that the determinants be grounded in theory. There is evidence that ease of use and perceived usefulness achieve all these aims since they were studied using a range of CMC technologies and a number of populations (Adams, Nelson, & Todd, 1992; Davis, 1989). To clarify the ease of use and perceived usefulness constructs, it is important first to specify the theoretical underpinnings of TAM, which evolved from the theory of reasoned action (TRA). Following a brief description below of relevant TRA concepts is a description of the TAM constructs that are of interest to the current study.

Generally, TRA is concerned with the determinants of consciously intended behavior, which is analyzed next. In TRA, a person's performance of an actual behavior is determined by behavioral intention to engage in a behavior. Behavioral intention is in turn determined by both attitude and subjective norms about a behavior in question (Fishbein & Ajzen, 1975, as cited in
Davis et al., 1989). According to TRA, behavioral intention is a measure of the strength of one's intention to engage in an identified behavior. Attitude is defined in terms of positive or negative feelings about engaging in a particular behavior. The subjective norm refers to an individual's perception that most persons important to him or her think she or he should or should not engage in a behavior. Attitude toward a behavior is determined by salient beliefs about consequences of performing a behavior multiplied by the evaluation of the consequences, which is an implicit evaluative response. By definition, beliefs are the individual's subjective probability that performing a behavior will result in consequences. An individual's subjective norm is determined by multiplying perceived expectations of specific referent individuals or groups and his or her motivation to comply with the expectations (Fishbein & Ajzen, 1975, as cited in Davis et al., 1989). To repeat the theory, there are determinants that lead to an actual behavior. On the one hand, beliefs and evaluations come together to form attitudes while on the other hand normative beliefs and motivation to comply come together to make a subjective norm. Both the attitude toward a behavior and subjective norm come together to create a behavioral intention, which is what then leads to engaging in an actual behavior.

TRA is a general theory that does not specify what beliefs are operative for any specific behavior. It is assumed that there are 5 to 9 salient beliefs for any given behavior that can be elicited from a representative sample by using free response interview. According to Davis et al. 1989, TRA is helpful in understanding technology because factors, besides those identified, affect behavior indirectly. In other words, variables such as system design, user characteristics, or organizational structure would only affect behavior if they indirectly influenced attitude or social norms. The implication is that TRA mediates uncontrollable environmental variables and
controllable interventions on a technology user's behavior. TRA captures the internal psychological variables through which external variables studied in technology research exercise their influence on users' acceptance (Davis et al., 1989).

Davis et al. tailored the TRA for modeling user acceptance of information systems with the goal of explaining the determinants of computer acceptance. In following the TRA approach, the Technology Acceptance Model (TAM) includes cognitive and affect determinants of computer-based technology acceptance and use that are meant to explain why a particular system may be viewed as acceptable or unacceptable to users (Davis et al., 1989).

Specific to information technology, Davis et al. (1989) applied the TRA model to determine the impact of external factors on internal beliefs. Like TRA, TAM postulates that actual computer usage is determined by behavioral intention. TAM posits that two particular beliefs, perceived usefulness and perceived ease of use, are of primary importance for computer acceptance behaviors. Perceived usefulness and ease of use are "postulated a priori and are meant to be fairly general determinants of user acceptance" (Davis et al., 1989, p. 988) Perceived usefulness is the "prospective user's subjective probability that using a specific application system will increase job performance" within a specific context (Davis et al., p. 985). People will either reject or accept using technology to the extent that they believe it will help them. A system high in perceived usefulness is one in which people expect some benefits. In contrast, perceived ease of use "refers to the degree to which the prospective user expects the target system to be free of effort" (Davis et al., p. 985). This is another way to state that people have limited energy, which they use judiciously. Yet, even if technology appears useful, people may have beliefs about how hard it is to use a system that can outweigh foreseeable benefits. In
other words, if people believe technology requires too much effort, it may not matter how useful it seems. If all else is equal, the system that is easy to use and acceptable is more appealing than another acceptable system that is harder to use (Davis et al., 1989).

According to Davis (1989), people accept or reject information technology because of these two determinants. It has been demonstrated that these two constructs are distinct dimensions (Adams, Nelson, & Todd, 1992; Davis et al., 1989), and that they are linked to attitudes and usage (Davis et al., 1989). Likewise, there is evidence that for asynchronous message exchange usefulness and ease of use are not related to underlying characteristics of technology but rather to implementation characteristics such as user expectations, user involvement, and training/support. Specifically, there is evidence that this is the case across software types, voice mail, and e-mail (Adams, Nelson, & Todd, 1992).

Three pieces of research are salient to the current study and are described below. First, Davis et al. (1989) tested the TAM and TRA explanations for how well each predicted actual use from behavioral intentions to use a system. Second, Davis (1989) presented and validated scales intended to measure perceived usefulness and perceived ease of use. Finally, a replication study of Davis (1989) by Adams, Nelson, and Todd (1992) is also described.

Davis et al. (1989) conducted research to assess TRA and TAM explanations for predicting increases in user acceptance from measures of their intentions in terms of attitudes, subjective norms, perceived usefulness, and ease of use. More precisely, the authors were interested in learning how well intentions predict usage, how well TRA and TAM explain intentions to use a system, whether attitudes mediated the effects of beliefs on intentions, and whether an alternate theoretical formulation could account for observed data.
To assess TRA and TAM, Davis et al. (1989) gathered longitudinal data from 107 full-time MBA students who were frequent users of a word processing program that they used voluntarily (i.e., not required by their program of study). Participants' behavioral intentions were measured following a one-hour introduction to the system and then 14 weeks later. The data were collected through interview and questionnaire formats. The researchers elicited salient beliefs through interviews that resulted in belief items, which is the method recommended by TRA theory (Ajzen & Fishbein, 1980, as cited in Davis et al., 1989). Participants were asked to list advantages, disadvantages, and anything else they associated with becoming a user of WriteOne, a word processing program. The researchers then compiled the expected outcomes. Davis et al. used questionnaires to gather data about perceived usefulness, ease of use, actual system usage, and attitude. Both TRA and TAM, therefore, were used to explain a specific behavior (usage) toward a specific target (WriteOne) within a specific context (MBA program). They used a 7-point, Likert type questionnaire by Davis (1989) that was worded in reference to the specific target, action, and context, but it was nonspecific to timeframe, which was in accordance with TRA and TAM. System usage was measured using 2 questions regarding frequency of participants' current use. Attitude was assessed using a 4-item scale (Davis et al., 1989).

The behavioral intention scale had a reliability estimate of .84 at time 1 (start of semester) and .90 at time 2 (end of semester). The attitude scale had reliabilities of .85 and .82 at times 1 and 2. The Usefulness scale had a .95 and .92 reliabilities at the two times. The Ease of Use scale had .91 and .90 reliability estimates at times 1 and 2. The subjective norm, beliefs,
and evaluations were operationalized with single-item scales, which Davis et al. reported was recommended by TRA, and as such had no reliability estimates calculated.

The researchers used regression analyses to determine whether TRA variables (attitude, behavioral intention, subjective norm) or TAM variables (EOU, U) explained a greater proportion of the variance. As theorized, both explained a significant proportion of variance with TRA behavioral intention determinants accounting for 32% and 26% of the variance in times 1 and 2. On the other hand, TAM determinants accounted for 47% and 51% at times 1 and 2. Subjective norm was not a significant contributor to behavioral intention. When examining the determinants of behavioral intention separately within TRA, attitude had a significant influence on behavioral intention. Within the TAM model, perceived usefulness had the strongest effect on behavioral intention, and U increased from time 1 to time 2. Attitude in TAM, however, had a smaller effect in time 1 with a nonsignificant effect in time 2 (Davis et al., 1989).

What makes the findings of Davis et al. meaningful is that TAM is a better model than the one generated by TRA for explaining technology use, and perceived usefulness added a significant explanatory power beyond attitude and subjective norm at both times 1 and 2, which emphasized the influential role of Usefulness in technology use. In addition, the belief and evaluation of software had a significant effect on behavioral intention over and beyond attitude and subjective norm in time period 2. Counter to what would be expected by TAM, ease of use had a significant direct effect over and above attitude in time 1 but not time 2, although attitude still appears to mediate effects on beliefs on intentions. More important to the current study are the findings about explaining attitude. As expected, both TRA and TAM variables explained
significant percentages of variance in attitude. TRA variables explained 7% and 30% of attitudes in times 1 and 2, but TAM variables explained 37% and 36% at times 1 and 2 with perceived usefulness having a strong effect on attitude (Davis et al., 1989).

To further analyze the nature of beliefs, Davis et al. conducted a factor analysis, which suggested that TRA and TAM converged on factors making a hybrid intention model. The regressions omitting nonsignificant variables resulted in perceived usefulness and ease of use accounting for 45% and 57% of the variance in times 1 and 2. The picture that emerged was that U and EOU are determinants of intentions to use a system and actual use of a system. In other words, combining the TRA and TAM "led to the identification of a parsimonious causal structure that is powerful for predicting and explaining user behavior based on only three constructs: behavioral intentions, perceived usefulness, and ease of use" (Davis et al., p. 997). U and EOU jointly determined participants' behavioral intentions, which appeared directly related to explaining user acceptance of technology within a specific context (Davis et al., 1989). Even though the acceptance and use of a system were in an academic context, the perceived usefulness and ease of use variables appeared to go a long way in explaining a user's acceptance of a system.

Davis et al. appropriately used structural equation modeling, which is a powerful multivariate correlational analysis that can be used for testing causal theories. This form of multiple regression can be used to demonstrate the causal relationships between variables, to generate a theory about the determinants of a behavior pattern of interest, and to develop a preliminary instrument. They used multiple regression to analyze the results, which is what is recommended for this type of study (Gall et al., 1996). Several issues were present in the Davis
et al. research that limits the generalizability of the findings. Participants were MBA students, a group which is not representative of all professionals' technology use. Likewise, the sample may not represent the range of computer literacy among all professionals. The system studied was only one word processing program. In addition to the limits of generalizability, the researchers used two measures that had only one item each. This presents an instrumentation problem because there is no way to determine the reliability of the scale and a single item is seldom an accurate measure of a construct.

The next study was conducted for instrument development purposes. Davis (1989) involved 152 computer users and four application programs in this research. Since there were multiple studies reported within Davis' work, they will be discussed separately. In the first study, 120 people were introduced to novel e-mail and file editor applications. Then the participants completed a self-report instrument. The Cronbach alpha internal consistency method was used to estimate subscale reliabilities. Davis (1989) used a factor analysis to test validity, and demonstrated that the ease of use and usefulness factors were distinct constructs. The researcher refined the scale based on the results from the first study, then conducted a second study to evaluate the scale. In the second study, Davis (1989) conducted the same analysis, but introduced 40 volunteers to two different novel applications, one for generating graphs and another for producing charts.

The results indicated evidence of high internal consistency estimates of reliability with Cronbach's alpha estimates of .97 of usefulness subscale and .86 for the ease of use subscale. Both studies provided evidence of validity of the scales. Further, through regression analysis, Davis (1989) demonstrated that there was a progression from how useful the programs were
and how easy a program was to use to participants' actual program use. In Davis' studies, however, participants were asked to self-predict future use after having practiced using the different softwares. Both studies supported Davis' hypothesis, which was that both perceived usefulness and ease of use were significantly correlated with self-reported indicants of system use.

Davis (1989) used sound methodology to demonstrate the validity and reliability of the instrument he developed. One problem with his study, however, was the lack of representativeness of the sample he used. This limits the generalizability of the results. A second limit to the research was that he asked people to predict their use as evidence of predictive validity. It would be more appropriate to allow time to pass during which participants used the new applications as the criteria for actual application use rather than a self reported estimate of future use.

Adams, Nelson, and Todd (1992) conducted two replication studies of Davis' (1989) work on the reliability and validity of Davis' instrument. Although Davis (1989) compared very different technologies (e-mail system and file editor), Adams, Nelson, and Todd (1992) compared the similar technologies of e-mail and voice mail with a heterogeneous group of people (i.e., across organizations). Adams, Nelson, and Todd (1992) used alternate technologies that shared common attributes in an attempt to discriminate between highly similar technologies, or a class of technology rather than a specific program. For example, in the first study, each of the 10 organizations used several different e-mail and voice mail packages. Further, all participants used systems voluntarily, which is critical since they were
actually using the different technologies successfully as opposed to reporting what they might expect to do in the future.

In the first study, 118 respondents from 10 organizations were surveyed about their attitudes toward specific technologies with which they were already experienced (i.e., 28 months average experience for voice mail, 21 months average experience for e-mail). For voice mail, Cronbach's alpha levels for the usefulness subscale was .94 and .88 for ease of use. For e-mail estimates the usefulness subscale was .93 and .81 for ease of use. The reliability value was .94 for usefulness and .93 for ease of use with e-mail, and with voice mail the estimates were .93 for usefulness and .81 for ease of use. Adams et al. (1992) demonstrated convergent and discriminant properties. Adams et al. found strong correlations for items belonging to the same subscale, and they found that scale items discriminated across technologies. The factor loadings based on varimax rotation demonstrated the two factor solution anticipated by Adams et al.. Therefore, the scales developed by Davis et al. (1989) turned out to have support in this replication study with similar reliability and validity characteristics, despite the heterogeneous sample and class of technology. In addition, both usefulness and ease of use were correlated with actual usage. After doing a path analysis, consistent with Davis et al.’s (1992) findings, Adams et al. (1992) found that usefulness was key to actual usage, but that ease of use was not an important determinant of actual use. E-mail accounted for 15.5% of variance and voice mail 17% of variance, which suggests that perceived usefulness is related to usage even though it cannot in isolation explain actual usage. Adams et al. concluded that although system use is not entirely explained by usefulness, there was evidence that usefulness is the key determinant of actual technology use.
In the second study within the work by Adams et al. (1992), 73 business students who used a university computer lab self-reported their use of the software packages of WordPerfect, Lotus, and Harvard graphics, which were the best selling packages of their type when the study took place. Both undergraduate and MBA students participated, and as with the first study, they were persons already using the programs. Participants were not required to use the programs under study, and they had numerous alternatives available to them in the computer labs on campus. Three estimates were reported for study two reliability. For all software programs, Cronbach's alpha was above .90 for both usefulness and ease of use subscales. The reliability value met or exceeded .93 for both scales across all three programs (Adams, Nelson, & Todd, 1992).

The same method used in study one was used in the second study by Adams, Nelson, and Todd (1992). Again, the scales had evidence of convergent and discriminant properties. For each of the three technologies, there was evidence of two factors. Adams et al. (1992) reported also that much like the first study, the scales allowed for discriminations between the three software packages. Unlike the first study, however, the structural equation analysis yielded a questionable level of fit. Upon closer examination, the results were not consistent across the different programs. For instance, the path from usefulness to usage with WordPerfect was consistent with the first study in that usefulness was more important than ease of use, but only 4% of the variance was accounted for by usefulness. In contrast, ease of use was more relevant for actual usage than usefulness with the graphics program, and it accounted for 30% of variability in actual program use. For the spreadsheet, Lotus, there was a positive relationship
between usefulness and actual program use, which means that the more useful the program, the more it was used. The Lotus path accounted for 35% of variance (Adams et al., 1992).

The second study, therefore, showed that the scales could discriminate between the programs, but that the relationship between ease of use, usefulness, and actual usage was complex. Usage can be high regardless of how easy a program is to use, and it appears that in some cases ease of use has more importance while in other cases usefulness does (Adams et al., 1992). Like Davis et al. (1989), Adams et al. (1992) appropriately used structural equation modeling to demonstrate the causal relationships between variables, to generate a theory, and to develop instruments.

One criticism of the method used by Davis (1989) and by Adams et al. (1992) is that the validity was determined by a method that is less precise than an approach that uses alternative measures of the usefulness and ease of use constructs. Given the state of instrument development, however, there was no way around this issue. Another criticism of all the studies is that there was bias in who ended up participating. For example, Adams et al. (1992) reports a 45% return rate for study one. It is possible that the participants differed from the non-participants who were included in the sample. In study two, the researcher analyzed the data of students who responded to a posting in computer labs. Seventy-two students out of an unspecified number who went to the lab over a one-week period completed the instrument. It is not clear if the results would have been different with a larger sample or whether the participants actually represent the populations, which is also an issue of generalizability. Similarly, the participants represent persons in business settings, and this limits generalizing results to the entire population of people using the technologies studied.
Regardless, research demonstrated that ease of use and usefulness constructs are distinct dimensions, and that they are predictive of attitudes and actual technology usage (Adams et al., 1992; Davis, 1989). Likewise, there is evidence that with asynchronous (non-simultaneous) messages, ease of use and usefulness are not related to any particular technology. Instead, as expected by the Technology Acceptance Model, ease of use and usefulness are factors related to actual usage (Adams et al., 1992). Most critical to the current study, this is the case across software types, voice mail, and e-mail (Adams et al., 1992). Accordingly, people accept or reject information technology because of their perceptions about how useful and how easy the technology is to use. There is reason to expect that counselors accept or reject CMC use for counseling bearing these same factors in mind. In particular, it seems reasonable to expect that belief about the usefulness of e-mail for counseling might alter counselors' perceptions of whether it is an appropriate medium to use in the moment as they read e-mail-based counseling.

**CMC Socioemotional Content**

Research on the quality of relationship development using CMC evolved from theories and research developed for the study of organizational behavior. Initial theories about CMC and socioemotional communications are consolidated below along with studies that used the theories to predict how text-based relationships develop in business settings. Following the review of initial theories, studies with contradictory findings are reviewed. Finally, there is a summary of the literature.

Initially, there were three basic theories involving CMC and socioemotional content, the social presence theory (Short, Williams, & Christie, 1976), media richness theory (Daft & Lengel, 1984), and lack of social context and cues theory (Kiesler et al., 1984). These theories
are briefly described below to illustrate the scope of research on CMC that is text-based. The social presence and media richness theories emerged from researchers who wanted to study communication in organizations with the aim of matching communication media and organizational tasks so that employees would be satisfied and efficient. The idea was that media (e.g., e-mail, video conferencing) differ in the extent to which they overcome constraints (e.g., time, distance), transmit human communication (e.g., social cues), and convey information (Lombard & Ditton, 1997).

The theories are related in that they address interpersonal communications of immediacy and intimacy, which were first applied to non-CMC interactions with variables of interest that are related to managers' effectiveness and group processes within organizations (Lombard & Ditton, 1997). As pointed out by the media richness, social presence, and lack of social cues theorists, people interact in ways that vary in physical closeness, eye contact, and level of conversation as well as through facial expressions, gestures, and voice quality when face-to-face. Although there are other variables that come together during interaction, both the media richness and social presence theories assume that people can adjust these variables and subsequently adjust the level of intimacy between them when face-to-face. All three theories assumed that the level could not be modulated in a CMC environment (Lombard & Ditton, 1997).

Lack of social cues. Kiesler et al. (1984) proposed the lack of social cues theory from a social psychological view. The concerns with CMC use were that in a CMC context, there are limited social cues, minimal contextual information, and no social norms. Kiesler et al. (1984) suggested that culturally, CMC was undeveloped with no strong etiquette about how it should
be used. In essence, the theorists suggested that CMC provided a forum in which people would "run amok" socially. The researchers raised questions about the effects of rapid message exchange, absence of regulating feedback (e.g., head nods, smiles), lack of social influence (e.g., bargaining), few status or position cues, and social anonymity on CMC exchange.

Accordingly, Kiesler et al. (1984) theorized depersonalized and deindividuation interactions in CMC that are characterized by anonymity, reduced self-awareness, and less self-regulation. From this perspective CMC interaction was expected to be task-oriented and impersonal with more hostility, estrangement, or dehumanization than face-to-face interaction.

Kiesler et al. (1984) conducted research to test out their theory. The research involved three-person groups who were asked to reach agreement about dilemmas presented to them. There were conditions of face-to-face and CMC groups. The investigators found that the CMC groups took longer to make decisions and were equal in task-oriented exchanges, but there was less dominance in CMC groups. Kiesler et al. also reported that there was a higher frequency of swearing, insults, name calling, and hostile comments in CMC, which although negative in valence constitutes some level of emotion communicated by CMC.

The difficulty with the results, however, is that Kiesler et al. (1986) did not specify exactly what they did experimentally, with whom they did the experiments they reported, how many participants were involved, or with which instruments they measured variables of interest. It is difficult to evaluate the findings reported in terms of internal or external validity given the cursory description of the research the investigators provided. It is important, nonetheless, to point out that the reported research defined interaction only in terms of
participation, decision-making, dominance, and inhibition. It is possible that a positive valence of emotional relating was present but not measured.

Recently, Kraut et al. (1998) conducted research that referenced the social impact of Internet use and social involvement that relied on similar theoretical assumptions as Kiesler et al. (1986). In particular, the question that Kraut et al. (1998) posed was whether or not the Internet improved or harmed community involvement and social relationships. The aim of the research was to report results of a field trial as well as examine the debate about the social impact of CMC. The researchers described a longitudinal study in which they followed the behavior of 169 participants who lived in 73 households in Pittsburgh, PA for a period of either one or two years. Families started using the Internet in either March 1995 or March 1996. A step to selecting the sample involved the selection of a subsample from four school or neighborhood groups. The first year's sample all had teenagers participating in a high school journalism class, and the families in the second year had an adult member who was on the Board of Directors at one of four community development organizations. Participating families received a computer, software, and a free telephone line along with free access to the Internet in exchange for permission to track their Internet use automatically and for completing questionnaires and in-home interviews. Two members of each household received a morning's worth of training on using the computer, e-mail, and the web. The authors reported that over 90% of the families contacted within the groups agreed to participate, and that for all but a few families, their study involvement was their first home computer experience (Kraut et al., 1998).

The data were collected at two times. The pre-test questionnaires were collected prior to Internet access and included demographic information, social involvement, and psychological
well-being. Following a time period of 12 or 24 months, participants again completed social involvement and psychological well-being questionnaires. The researchers also measured social extroversion. Some family members went to college and other families moved, therefore the follow-up questionnaires represent 169 people from 73 households of the original 256 participants from 93 families. A logging program was used to record Internet usage in the total hours in a week that a participant connected to the Internet (Kraut et al., 1998).

The researchers used various instruments to measure the constructs they intended to measure, which included Internet use, social involvement, and psychological well-being. Social involvement was defined as family communication, size of local social network, size of distant social network, and social support. For family communication measurement, participants listed all members of the household and estimated the number of minutes they communicated with each member daily. The total amount of family communication was the sum of minutes communicating. Pairs reported .73 agreement of their estimations. Kraut et al. used statistical methods to account for the number of family members in their analysis. To measure local social network, participants estimated the number of people in the local area with whom they socialized at least once monthly. The distant network consisted of people out of the Pittsburgh area who participants talked to at least yearly. Social support was measured by using a 16-item instrument, the Interpersonal Support Evaluation List (Cohen, Mermelstein, Kamarck, & Hoberman, 1984, as cited in Kraut et al., 1998). The Cronbach reliability estimate for the instrument was .80, but no validity evidence was reported (Kraut et al., 1998).

To measure psychological well being, participants were asked to answer three items from the UCLA Loneliness Scale, which had a Cronbach's alpha reliability estimate of .54.
Again, there was no reported validity data. Participants were also asked to answer whether they experienced one or more of 49 daily life stressors in the preceding month. These items were from the Hassles Scale (Kanner, Coyne, Schaefer, & Lazarus, 1981, as cited in Kraus et al., 1998). There was no reliability or validity data reported for the scale. Finally, the participants answered 15 items from the Center for Epidemiological Studies Depression Scale (Radloff, 1977, as cited in Kraut et al., 1998). Kraut et al. (1998) reported that the reliability estimate was .86, however, it was not clear if that was for the entire scale. No validity data were reported. For the analysis, Kraut et al. reported statistically controlling initial social involvement and psychological well being as well as demographic and other control variables.

The analysis was done using a path model to test relationships among variables measured at three time periods: (a) pretest questionnaire at time 1, (b) Internet usage at time 2, and (c) posttest questionnaire at time 3. Kraut et al. used statistical associations among demographic characteristics, social involvement, and psychological well being measured at time 1 and Internet use measured at time 2 to estimate how much preexisting personal characteristics led people to use the Internet. The researchers also looked at the link between social involvement and psychological well being at time 1 and time 3, which was meant to reflect stability in social involvement and psychological well being. Kraut et al. argued that linking Internet use at time 2 and social involvement and psychological well being at time 3 was evidence that using the Internet changes social involvement and psychological well being. Kraut et al. argued that their analysis controlled for participants' demographic characteristics and the initial level of the outcome variables. As such, the researchers further argued that the coefficients associated with the link between Internet use at time 2 and outcomes at time 3 was
the effect of Internet use on changes in both social involvement and psychological well-being. Kraut et al.’s logic was that using longitudinal data, measuring Internet use, and measuring outcome variables twice allowed them to evaluate how initial social involvement or psychological well-being led to Internet use.

In their results, Kraut et al. reported means and standard deviations of demographic variables, measures of Internet use, social involvement, and psychological well-being. They present a correlational matrix, but the majority of the results were path model summaries. In reporting social involvement, Kraut et al. reported their findings specific to family communication, size of participants’ social networks, and social support. First, the researchers described family communication through their path model with the amount of time participants communicated with other household members as the dependent variable. When examining coefficients in the model, they reported that teenagers used the Internet more hours than adults, but whites did not differ from minorities and females did not differ from males in average hours of use. Different families varied in Internet use, but the amount that an individual family member communicated with other family members did not predict subsequent Internet use. Whites increased family communication more than minorities, and adults increased their face-to-face communication more than teens. Kraut et al. finish the family communication section results by stating that “for our purposes, the most important finding is that greater use of the Internet was associated with subsequent declines in family communication” (p. 1025).

Second, the researchers reported data about the size of participants’ social networks. Since social extroversion could influence the number of friendships participants maintain, the researchers included social extroversion as a control variable. Kraut et al. reported greater
social extroversion and a larger local network predicted less Internet use. Whites increased their distant social networks over time while minorities did not, and teens increased their distant social networks more than adults did. The groups did not differ in changes to their local social networks. Holding these variables constant, greater Internet use was associated with declines in local and distant social circles (Kraut et al., 1998).

Third, social support focused on both belonging to groups as well as on the availability of tangible resources, intangible resources, and self-esteem. The association between social support and Internet use was negative, but not statistically significant. Specific to psychological well-being, Kraut et al. reported results on loneliness, stress, and depression. Initial loneliness did not predict Internet use, and loneliness was stable over time. In addition, wealthier individuals increased in loneliness more than poorer participants, men increased in loneliness more than women, and minorities increased in loneliness more than more than Whites. After controlling for these personal characteristics and initial loneliness, the researchers concluded that according to their path model people who used the Internet more often reported more loneliness (Kraut et al., 1998).

The researchers used their path model to describe analysis involving reports of daily hassles as an index of stress. The occurrence of stressors was stable over time, but people who used the Internet more reported experiencing a greater number of daily life stressors in a subsequent period, an increase that the researchers reported as marginally significant. Using a post hoc analysis, Kraut et al. concluded that no single stressor changed reliably from baseline measurement to post-test measurement.
The model for the path analysis involving depression included the hassles and social supports from time 1 as covariates. Initial depression did not predict use, and minorities had greater increases in depression than Whites. Participants with higher initial stressors also reported greater increases in depression. They concluded that after holding constant initial depression, demographics, stress, and social support, the important finding was that greater Internet use was associated with increased depression.

In their discussion, the Kraut et al. point out that greater use of the Internet was associated with a small but statistically significant decline in social involvement as measured by communication within the family and size of local social network and increases in loneliness. Similarly, greater Internet use was associated with depression. Other effects on the social circle, support, and stress did not reach significance. The researchers stated that the findings were consistent with their hypotheses that Internet use adversely affects psychological well being and involvement socially. Kraut et al. also argued that the panel research design "gives us substantial leverage in inferring causation, leading us to believe that in this case, correlation does indeed imply causation" (p. 1028).

In critiquing the article, the most striking point to highlight was the basic design of the study. The findings of the descriptive study reported were based on correlations, and correlation does not equal causality. By design, the panel study research is a description of a sample over time, and although researchers can note changes in the same sample, the results yield only possible reasons why individuals have changed rather than causal reasons. The longitudinal design created multiple threats to the findings. Specifically, the sample started with 256 participants in 93 homes. There was a 33% attrition rate at post-test. With this attrition also
comes the risk of retaining a biased sample since the participants who dropped out might differ from those who remained. The sample during pre-testing was already biased since there were some household members who declined to participate and no one under 10 was included. In addition, the external validity was threatened by the interaction of testing by repeated measures. Threats to internal validity included history, maturation, and problems of selection. Over a one to two year period of time, people most likely experienced developmental changes, and there might have been unknown factors that influenced the measures that they did not attend to. The sample represented people selected because of group membership from a small region, which makes generalizing the results limited.

The path analysis method was appropriate for testing the validity of Kraus et al.’s (1998) theory since this method is appropriate for determining correlations between three or more variables. The researchers identified causally linked variables of interest, however, there was a problem with their path analysis. Specifically, it is critical to select measures of variables that are specified by the hypotheses. Although Kraus et al. (1998) used multiple measures to determine the constructs of interest, they did not provide validity evidence about any of the instruments that they used, one of which had a questionable reliability estimate of .54. It is therefore unclear if the researchers measured what they claim they measured. Their construct of general psychological well being seemed flawed given that well being is a vague term. Without the validity evidence about the instruments, the statistical analyses were questionable. Another problem was that social networks were defined and measured as face-to-face contact, which excludes social on-line contacts and biases the data to one medium of communication. It is possible that the data did not reflect any changes in social contact that took place using the
technology that they aimed to study, which means that any positive and socially-oriented on-line interactions were excluded from the data they analyzed.

**Social presence.** Social presence is theorized as a sense of interaction and involvement among people that forms interpersonal relationships (Short, Williams, & Christie, 1976). A sense of social presence is achieved when a person perceives that a medium, such as CMC, has social qualities such as warmth or caring. The perception of social presence occurs despite the fact that a communication partner uses a computer to mediate his or her message. For people to experience a sense of presence by any medium and allow social interaction, as opposed to exchanging task-oriented content, a medium must be capable of conveying the subtleties of a social exchange. For example, a medium such as videoconferencing is theoretically higher in social presence than talking on the telephone. By that account, text-based CMC is predicted to be low in social presence since it lacks nonverbal cues that are available in face-to-face interaction, and as a medium CMC does not allow people to share time, location, or space to the extent that face-to-face interaction does (Short, et al., 1976). Thus, CMC is assumed to be less intimate than face-to-face communication.

The research on presence includes a wide range of studies, however, the ones most salient to the current research involved media selection given an assumed level of social presence available by a medium. For example, Perse and Courtright (1993) assumed that people communicate to satisfy personal goals, which they described as a uses and gratification perspective. In essence, they stated that people are active communicators who evaluate various channels of communication (e.g., CMC, face-to-face, television), and then select the channel that suits their need or meets their gratification.
To study this theory, Perse and Courtright (1993) asked 649 people aged 12-85 years, to complete self-administered questionnaires. Participants were asked to indicate how well 12 different mass and interpersonal communication channels filled 11 communication needs. The mass and interpersonal channels included newspaper, magazines, books, movies, radio, non-cable television, cable television, VCRs, recorded music, computers, telephone, and conversation with family/friends. The needs statements included reasons such as to forget about work, have something to do with friends, feel less lonely, and satisfy a habit. The participants were all asked to rate the 12 channels for social presence. Using a five point Likert-type scale (the semantic anchors of the 5 points were unspecified), participants were asked to indicate how personal, sensitive, warm, social, and active they perceived the 12 channels to be. The Cronbach estimates were from .72 to .86 for the 12 five-item social presence scales. The participants also rated how well a single channel satisfied the entire set of 11 needs. The evaluation of the entire set of 11 needs was analyzed by a multivariate analysis of variance to identify if clusters of media were associated with differences of fulfillment between and among various communication needs (Perse & Courtright, 1993).

Cluster analysis identified 5 channel clusters (video, interpersonal, print, computer, and audio) that included the interpersonal cluster (conversation and telephone), which was rated as able to fulfill all needs. Telephones were seen as satisfying interpersonal needs (e.g., overcome loneliness, show affection), but computers were rated the least useful in meeting interpersonal needs. Printed materials were useful for learning, but not for meeting social needs. Clusters most useful at filling personal needs were also rated highest in social presence. Specifically, the highest rated mediums for social presence were conversation, telephone, and recorded music,
which were followed by movies, radios, and books, VCRs, television, newspapers. Computers were seen as least likely to be perceived as having social presence (Perse & Courtright, 1993). It is worth noting that the computers in the study were judged prior to the growth of the Internet.

Perse and Courtright (1993) appeared to follow accepted practices with respect to participant recruitment, and the sample consisted of undergraduate students who attended one college as well as people not enrolled in college. The sample was drawn from a wide geographic area, which makes it possible to generalize the results to the general population in other regions. The researchers provided some level of validity by selecting dimensions mentioned in previous studies, but there was no evidence of construct validity for their instruments. Instead, they indicated that they used only one statement per communication need. These statements were chosen as exemplars of salient dimensions in past research, which is a weakness of the research. It is possible that in focusing on salient dimensions the authors did not capture the full range of communication needs. The reliability estimates were acceptable for research done with questionnaires with the average estimate being .80. As is the situation with self-report research, the data reflect what participants report, which can be viewed as a weakness in most studies. Unlike most studies, it was appropriate for this study since the researchers wanted to learn about perceptions that people have about the social presence of different mediums. As noted by the authors, the research also did not include emerging technologies that may have more interactive qualities (Perse & Courtright, 1993).

Papacharissi and Rubin (2000) also studied social presence theory in terms of which Internet mediums provide social presence and subsequently gratify needs. The researchers
surveyed 279 volunteer undergraduate students, approximately half of whom were male. The participants were asked to complete a series of instruments. The first instrument was on motives, which are influences on people's actions used to fulfill a need or want (e.g., interpersonal needs such as inclusion, affection, and control). The second instrument was used to determine life position (e.g., life satisfaction, economic status). A third instrument was intended to measure how anxious and fearful about interpersonal encounters participants were (avoidant), as well as how valued participants felt they were to friends and family (reward). The authors also used instruments to measure social presence and Internet satisfaction, as well as to learn the amount and duration of Internet use for the participants. For amount and duration, they asked for frequency in minutes per day. For social presence, however, they used a five item semantic differential scale (i.e., "Very" to "Not at All" responses). Following completion of the instruments, the researchers did a canonical correlation to investigate multivariate relationships between motives and the other variables under study. Using a hierarchical regression analysis, the researchers entered age and willingness to communicate first, social presence second, and motives third. The results yielded five motives for using the Internet, which were interpersonal use, information seeking, convenience, passing time, and entertainment. The strongest correlation ($r = .35$) was found between interpersonal use and how valued participants felt they were to friends and family. Participants who found interpersonal communication less rewarding were anxious with face-to-face communication, and used the Internet for interpersonal reasons. Interpersonal use was found to be a predictor of amount of Internet use. Information seeking and entertainment were correlated with e-mail use, and convenience predicted newsgroup, listserv, and bulletin board use. Three predictors of
participants' Internet use to increase affinity with others were social presence, participants who found interpersonal interaction rewarding (e.g., others valued their opinions), and mobility in life (an indicator of social satisfaction). In summarizing the results, Papacharissi and Rubin (2000) pointed out that information seeking, the most salient use of the Internet, suggested that the Internet is used as an instrument. In contrast, the Internet use for interpersonal reasons was less easily interpreted. Social presence correlations suggested to the researchers that participants who perceived of the Internet as warm and social, actively used it for passing time, interpersonal reasons, entertainment, and convenience (Papacharissi & Rubin, 2000). The latter finding is notable since the current study includes the supposition that the Internet is perceived as interpersonally warm within an interpersonal counseling relationship.

There are some limits on Papacharissi and Rubin's (2000) research that include the design and instruments. The design was a causal-comparative one that can be used to predict a combination of several criterion variables from predictor variable. Although the researchers appeared to follow the design and use, the design was not one that allowed the researchers to determine causality. Specific to the instruments, Papacharissi and Rubin (2000) selected instruments without offering validity evidence in most cases, and the reliability estimates were generally low. In particular, the instrument on motives that fulfill needs had three items, which were subject to a factor analysis that demonstrated the a priori categories hypothesized. It is difficult to expect that three items adequately assess the construct let alone provide sufficient evidence of distinct factors. There was no data on the reliability reported. The scale for life position had an internal consistency reliability estimate of reliability of .75, but there was no reported validity evidence. The internal consistency estimates for interpersonal encounters were
.89 for the avoidance subscale and .88 for the reward section. No validity evidence was reported. For social presence, they used a five item scale with a reliability estimate of .65, but again there was no validity evidence provided. It is possible that the small number of items contributed to the low reliability estimates, however, it is not clear if the data gathered using the instruments selected measure what the authors claim they measure. This makes the results questionable.

Perse, Burton, Kovner, Lears, and Sen (1992) studied e-mail and computer bulletin board use in a college class. They hypothesized that computer experience, computer attitudes, and social presence would predict higher levels of computer-mediated communication (CMC). A total of 130 undergraduates (aged 18-44) completed questionnaires in a class trained in CMC. Participants performed various tasks with different mediums and then evaluated each medium on a series of bipolar seven-point Likert-type items such as impersonal-personal, sociable-unsociable, sensitive-insensitive, or cold-warm. The ranking was supposed to reflect the subjective judgement of a person using a particular medium to complete a specific task. Perse et al. found that weekly computer use and social presence were significant positive predictors of CMC. They found that anthropomorphizing, or personalizing computers (e.g., attributing failures with computers to willful machines rather than their own skills), was a significant negative predictor of CMC use.

Perse et al. appeared to follow accepted practices with respect to participant recruitment. The sample consisted of 130 of a possible 397 undergraduate students who attend one college, so the volunteer sample might be unrepresentative of all students. Using only students limits the generalizability, too. In selecting instruments, the researchers provided some
level of validity by selecting dimensions mentioned in previous studies and by subjecting the instruments to a factor analysis. Yet, there was only a modest reliability estimate, .63, for their measure of social presence. As is the situation with self-report research, the data reflect what participants report, which can be viewed as a weakness. Perse et al. also did not include emerging technologies that may have more interactive qualities.

*Media richness.* Similar to social presence theory, the media richness theory states that communication across media again differs by the number of social cues available with different mediums (Daft & Lengel, 1984; Rice, 1992b). Using this theory, text is lean in media richness since writing lacks nonverbal communication, while video conferencing is a richer medium because it is rich in social cues. Face-to-face is again predicted to be the richest in cues given the immediate feedback and multiple social cues (Daft & Lengel, 1984). The richness of information is less subjective than social presence because it focuses on the medium's capacity for immediate feedback, the number of senses used, and language variety (Rice, 1992b).

A study by Rice and Love (1987) used the media richness approach to illustrate socioemotional content in CMC. In the study the researchers analyzed six weeks worth of interactions from a nationwide public computer conference. The researchers and two additional people subjected the data to content analysis in which each sentence was coded as either socioemotional content (i.e., solidarity, tension relief, agreement, antagonism, tension, and disagreement) or task-dimensional (i.e., ask for or give information or opinion). There was a correlation between the number of sentences (duration) and the number of messages exchanged (frequency). The emotional content increased the more people sent messages. There was not an increase in proportion of emotional content over time (i.e., style was determined early in
exchanges), but one-third of the exchanges were rated as having socioemotional content, most of which had a positive valence. Finally, the communications posted between individuals as compared to communication posted to the entire bulletin board group were similar in socioemotional level. Interestingly, the main implication posed by Rice and Love (1987) was contrary to what was expected by media richness theory since they found that a text-based CMC system supported socioemotional communication. Moreover, Rice and Love (1987) reported that there were communal norms, goals, and structure in the research community studied, and that the community of users had minimal hostility.

One major criticism of Rice and Love's (1987) research is that the participants' exchanges were collected without consent from participants. Further, by design the results are based on correlational data, which although interesting do not allow for any causal conclusions (e.g., more frequent communication lead to longer messages). Rice and Love (1987) also used each sentence as a unit of measure, but this approach does not analyze the ongoing and reciprocal nature of relationships. There may be multiple levels of relationships with differing levels of familiarity. In other words, it is not clear what effect messages sent early in an exchange had on later exchanges. Related to this issue is a time sampling problem since it is not clear how much of a time slice is a sufficient sample of the system. Rice and Love analyzed at a six-week interval, representing only 11% of the conference participants, which does not represent all exchanges on the system. Finally, the coding system had a task and socioemotional dichotomy that oversimplified the ways that people relate. Put simply, the coding system was not sensitive to the subtleties of interpersonal exchange, and furthermore no exchange could be considered both task and socioemotional in function using this design.
King and Xia (1999) based their research on social presence theory, media richness theory, and the technology acceptance model. They pointed out that there was conflicting evidence to support social presence and media richness theories, and hypothesized that perhaps a logical assumption inherent to both theories was not enough to explain why people accept certain CMC. Specifically, they proposed that media properties such as richness are subjective and influenced to some degree by individual experiences with different mediums over time. They posited that experience influences rational evaluation and expectations about the fit between a medium and a task and an individual's awareness of the capabilities of a medium. As such, they investigated the effects of the individual's experiences on one's acceptance of a spectrum of mediums that were concurrently available and used by most organizations, including traditional mediums (e.g., face-to-face, telephone, letters and notes) and emerging computer-based communication mediums (e.g., e-mail, voice mail).

The research involved a longitudinal quasi-experimental design. A pre-test questionnaire was completed by participants that covered background information, computer experience, current experience with communication technologies, and her or his judgement of the appropriateness of 9 mediums for 11 tasks. Sixty groups of five members each were formed based on areas of expertise to approximate the cross-functional teams that are used in the workplace. Each team had two projects to complete following instructions about how to proceed. Where participants lacked skills, they were instructed to ensure similar levels of exposure to the different communication mediums (e.g., e-mail functions such as reply, creating a distribution list, and attach a file were taught, and all were taught how to resolve a
business dilemma using a specific system). At the end of 7 weeks, a post-test questionnaire was administered that was the same as the pre-test measure (King & Xia, 1999).

The mediums evaluated in the study were electronic meeting system, individual and group face-to-face, telephone, voice mail, handwritten note, formal letter, e-mail, and fax. King and Xia found that individuals did not evaluate the different communication mediums' appropriateness by rationally considering the nature of a task and the social presence of the mediums. Rather, individuals' evaluation from Time 1 to Time 2 showed the effect of experience on perceptual changes in the appropriateness of each medium for each task. Specific to e-mail, which is relevant to the current study, it was judged as appropriate for getting to know someone, staying in touch, resolving disagreements, and making important decisions. Interestingly, the appropriateness perception changed more for new mediums than for traditionally rich media (12 significant changes among e-mail and electronic meeting system between Times 1 and 2, compared with 10 significant changes among face-to-face, group meetings, and telephone mediums). In other words, they found that a participant's choice of media for a certain task was significantly correlated with one's experience with the media rather than the rationally evaluated fit between mediums and tasks. They concluded that as individuals gain more experience with media over time, they might revise their perceptions of the medium's appropriateness for performing certain tasks (King & Xia, 1999).

As with any study, there were weaknesses to King and Xia's (1999) research. A pretest-posttest design without a control group creates numerous potential sources of internal and external invalidity. Threats to internal validity included history, maturation, testing, interaction of selection, and other factors. Interaction of testing and treatment, as well as interaction of
selection and treatment threatened external validity. In addition, the study did not link individual experience with actual task performance, but asked for a self-report about perceptions of certain mediums for particular tasks following participants' increased experience with communication media. The sample was made up of students, and this limits the generalizability of the results to the general population. A strength is that King and Xia were explicit in describing the psychometric properties of their instruments, providing ample construct validity evidence and internal consistency reliability estimates that ranged from .74 to .88.

Among the lack of social cues, social presence, and media richness theories described above, the unifying belief is that when people are face-to-face, there is a sense of presence that is communicated within a rich social context not only by speech but also by nonverbal communication (e.g., posture, gestures, eye-contact, amount of smiling). Further, face-to-face communication is inherently rich in social cues and feedback such as status cues, etiquette, and nonverbal communications. In contrast, a mediated interaction, such as text-based CMC, has a dearth of social information that would otherwise be available if people were face-to-face since people sharing the same physical space have available to them a number of senses (i.e., visual, tactile, olfactory, auditory) from which to gain relationship cues. Again, the focus of all these theories is on the absence of information and an assumed lack of social presence inherent in CMC.

It is important to keep in mind that from their inception neither social presence nor media richness theories considered the emotional intensity and valence of emotion since these were both assumed to be low. Instead, these theories were intended to explain interactions
among co-workers for maximizing efficiency and for selecting the most appropriate communication medium to complete work tasks. Accordingly, the research factors of interest included activities such as generating ideas, making decisions, and exchanging time-sensitive information. Therefore, theorists did not consider other contexts in which the theories might apply.

These theories are relevant to the current study because they were developed by researchers who studied CMC based on the assumption that CMC lacks necessary cues and social regulation to allow interpersonal relationships to develop (e.g., Kiesler et al., 1984). Yet, within the same research there were contradictory findings that a level of socioemotional connection appeared when people used CMC (Kiesler et al., 1984; Rice & Love, 1987). Likewise, it might not only be the medium, but experience with a medium, that determines whether an individual perceives that a medium is appropriate for a task and has social presence (King & Xia, 1999).

Socioemotional content. Other studies provide direct evidence of social-emotional communications in CMC. Hellerstein (1985), as well as McCormick and McCormick (1992), described social use of CMC in a university setting. In the first study, a random sample of registered e-mail using undergraduates were asked to answer an online survey about their use of a university-based system (Hellerstein, 1985). Out of the sampled 650 students, 236 completed a questionnaire with the majority of them being males students age 18 to 22. According to Hellerstein, there were as many males and females who used the system regularly, but the computer science subculture who used e-mail in the early 1980s was dominated by men who were also more likely to own their own computer or use a mainframe
computer. The sample was divided into heavy and light users with heavy users being those who used the system several times a week. When asked the purpose of their use, the heavy users reported that the majority of e-mail was to communicate socially, while light users did so for help with homework and socializing equally. The heavy users were more likely to initiate new friendships that lead to face-to-face contact, but light users were more likely to alleviate boredom through e-mail. As would be expected, the heavy users felt the system was very important. Interestingly, the heavy users also felt they were too dependent on the computer for social contact, but they preferred and chose CMC contact as well as felt a part of a subculture and social group (Hellerstein, 1985).

In critiquing the study it is clear how the author defined a computer subculture, the primary impetus for the investigation. Hellerstein (1985) studied the phenomena important to understand how and why people were using e-mail as well as benefits and problems associated with use. Though Hellerstein (1985) described the broad types of questions in the survey, there are instrumentation questions since the author did not provide evidence of measurement reliability or validity. As with any questionnaire, the reliability of the results might be effected by the self-report nature of the instruments. The sample was selected at random, but responses were only from participants at one university, and the response rate was low, which threatens the generalizability of the findings. Even with the limitations of the study, the results supported the observation that students used e-mail to start and develop friendships.

As stated above, McCormick and McCormick (1992) also explored content of undergraduate students' electronic mail, the majority of whom were computer science majors. Unlike Kiesler et al. (1984), the theory underlying the study by McCormick and McCormick
(1992) was not that CMC has either a friendly or hostile impact, but that CMC is inherently neutral with the potential of communicating a full range of interpersonal messages.

Both observational and self-report methods were used to look at the content of approximately 700 undergraduate students, 70% of whom were computer science students. The observational part of the study consisted of collecting automatically all electronic mail messages beginning every consecutive 3-hour period. Hence, any messages not deleted were included. The investigators removed identifying information, and had 4 raters (two coding teams) use a 12 category coding system. Coders agreed between 82% and 90% about primary coding categories. The work-related (i.e., technical operations, work comments, software exchange) communications made up 41.1% of the interactions. In contrast, 51.7% of the messages were purely social in purpose. Social messages were subdivided into less intimate (i.e., salutation, threats and putdowns, crude flirtation, humor) and more intimate (i.e., social plans, news and sharing, refined flirtation, relationship establishment, love messages). In the results, McCormick and McCormick (1992) reported that the less intimate codes were significantly shorter than more intimate categories. Longer e-mail messages were related to self-disclosure and more refined flirtation. Communication was also characterized by sophistication level with sophisticated messages more frequently occurring later in the semester than at the start. The hostile interactions made up a small part of the interactions (4%) with some of these exchanges not from dislike or alienation, but rather appeared to be between young men who knew each other. The content analysis concurred with the self-report measure. Specifically, students confirmed the wide use of work comments and socialization through CMC. In general, students used e-mail to help each other with classes, communicate emotional
support, and maintain social contact. Moreover, there was no strong evidence that using CMC resulted in disinhibited or socially offensive interactions (McCormick & McCormick, 1992).

The self-report part of the study included 212 volunteers who completed both a demographic and an electronic mail questionnaire that had an essay format. The majority were computer science majors (76.6%) and male ($n = 152$). The questionnaire addressed the extent and use of e-mail, but there was no psychometric information provided about the instrument. The coding system used for the observational study was altered to fit the open-ended self-report responses. From the self-reports, students expressed using e-mail widely for work comments as well as to fill time while waiting for computers to compile data. Consistent with what was gathered through observation, a number of students reported using e-mail to share humor. The self-report and observational data matched exactly with regard to using e-mail to socialize (51.7%). Likewise, a small proportion reported using e-mail to transmit relationship or love messages (2.5%). Some students did not report why they used e-mail. Thirty-four percent of the self-reporting sample never used e-mail. Reasons identified for not using e-mail were "no reason" (27.7%), having no time or a waste of time (19.3%), preferring private conversations (18.1%), and being uninformed about e-mail (4.8%). Only 4.7% reported using e-mail a great deal or for romantic reasons. There were no gender differences in the amount of e-mail sent, but females received more e-mail. Consistent with the observational data, the majority of the undergraduates used e-mail to support each other while they worked on rigorous assignments and to maintain social relationships (McCormick & McCormick, 1992).

Like other studies described above, the researchers used publicly available data for their analysis, and the participants were not informed that their e-mail data were used for a study and
 eventual publication. In contrast to other studies, however, McCormick and McCormick (1992) made an effort to protect the confidentiality of participants' e-mail by using a computer-generated warning that allowed system users to delete messages before their e-mail was captured in a file. Methodologically, unlike some other CMC research, McCormick and McCormick provided quantitative and qualitative data analyses. In previous studies only the content of CMC interactions were analyzed. McCormick and McCormick (1992) used thick description that brought to light examples of the representative exchanges of the different codes they applied to the data, which other studies did not do. Earlier studies offered a handful of examples that fit the content codes they generated. For McCormick and McCormick (1992), the assignment of codes was subject to reliability checks with a high inter-rater reliability of .98.

The investigators created the self-report measure for the second part of the study, and they described the broad areas of questions, yet there was no psychometric information on the questionnaire. It is not known how many people deleted messages to avoid having them captured on file, raising the question of the representativeness of the sample. It is also possible that a small minority of students generated much of the messages exchanged within the local system. Hence, the results have a limited generalizability.

Phillips (1983) also provided evidence that CMC can include socioemotional content, finding that there is evidence of love, hate, spontaneity, and creativity in CMC. In the multiple case studies reported, the author analyzed three separate computer conferences. Unlike traditional conferences where people meet in designated rooms, the computer conferences were characterized as a print-based discussion. Using software packages, conference participants linked to a central computer that they accessed through "dummy" computer terminals (i.e., not
by personal computers now used) at different locations. The conferences ranged from interactions over one week to those spanning 4 months. After the conferences took place, Phillips looked at the transcripts and content analyzed the comments and interactions as a way to illustrate people's ambivalence toward using computers, implications of using a text-based medium, and responses to being alone without knowing if someone was "listening."

Most salient to the current study were the observations about interpersonal relations among conference participants. According to social presence theory, exchanges that are only in text and relayed by a computer would have low social presence. Phillips (1983) stated that if social presence theory were entirely true, then CMC users would interact in an impersonal way, yet in the transcripts this did not appear to be the case. Even with work-related tasks as the focus of interaction, there was a need for people to be overt emotionally and to make an attempt to anticipate others' reactions or compensate stylistically for absent cues typical in face-to-face exchanges. Given that Phillips interpreted the transcripts herself, the conclusions she drew are subject to multiple criticisms. What makes the study relevant is that there appeared to be examples of socioemotional content, which runs counter to what prevailing theories predicted. Phillips also noted that interactions changed over time.

Phillips (1983) noted many examples of humor, and a number of overt disagreements, which were embedded within friendly exchanges. Another issue addressed was the topic of anonymity, and there are examples of how even anonymous participants come to know each other based on style or other familiar writing patterns. Phillips noted that some people were more comfortable writing than others and some people were able to articulate their feelings, while being alone with a terminal was more acceptable to some than to others who wanted
feedback that someone was "listening out there." What is interesting in the multiple case studies reported by Phillips was that unlike most literature, she documented the relay of emotional content or compensatory behaviors people used when they are adapting to a written medium.

The most obvious criticism of Phillips' research (1983) is the case study nature of the study. Such a design brings into question the internal validity of the results since history, maturation, selection, and mortality may explain some of the findings. There is also an issue of the potential interaction of selection and the observations that were subject to a content analysis, which brings into question the generalizability of the findings.

Finally, in a meta-analysis study, Walther et al. (1994) examined previous CMC research for time effects. The intent was to account for differences in findings that appeared between field and experimental results. In the literature, Walther et al. (1994) found CMC and face-to-face comparisons and CMC-only research. The researchers used ratios of social versus task oriented exchanges, then compared the scores as to whether or not the exchanges were time limited. When comparing face-to-face and CMC interactions, time was what discriminated the amount of social versus task oriented communication. Specifically, the degree of socioemotional communication in CMC was greater when interaction time was not limited. With no time restrictions, communication was more positive than when restricted (e.g., one-shot groups), and only a small proportion (3%) of interactions were antisocial. Finally, the element of time did not distinguish CMC and face-to-face partners specific to antisocial interactions (i.e., flaming) for either face-to-face or CMC modes. In other words, it was not the medium, rather time using the medium, that distinguished relational quality (Walther et al., 1994).
Walther et al. (1994) were clear about the inclusion of sources for the analysis, which included academic journals and book chapters containing reports of quantitative data on the dependent variables of interest. They excluded studies that used projective assessments (i.e., participants project the appropriateness of mediums without ever having used a medium). They also only included unstructured interactions. Of the 350 sources, they analyzed 35, which was a potential problem with the analysis. It is possible that Walther et al. were unaware of some pertinent research, however, it is also possible that there was a small set of data from which many articles were published. The typical effect size coefficient used with meta-analytic studies (i.e., the magnitude of the difference between experimental and control groups) was not possible given the large number of studies that reported descriptive statistics rather than an $F$ or $t$ statistics used for determining effect size. Where there were no control data, Walther et al. calculated Cohen's $g$ to compare observed proportions of CMC interactions against chance. Where there was a control group they used the coefficient for the difference between proportions, Cohen's $d$. The use of the calculated $g$ and $d$ were appropriate for proportional data that they analyzed. Likewise, Walther et al. used appropriate test statistics for nonparametric data for the meta-analysis contrast analysis.

Walther et al.’s meta-analysis had its own weaknesses. Any meta-analysis is affected by the quality of the studies included, which might reduce the confidence of the results of the meta-analysis. In addition, the researchers aggregation of socioemotional messages was done by lumping positive comments into one category and negative socioemotional comments into another category. The large categories might oversimplify the nature of the interactions. The
nature of the task, however, might have necessitated this global approach rather than allowing for more discrete categories.

Summary. The literature on the socioemotional content of CMC was at times based on data that were collected with ethically questionable methods (e.g., Hellerstein, 1985; McCormick & McCormick, 1992; Rice & Love, 1987). Consistently, there were questions about time sampling and the representativeness of samples, which limited the external validity of results. Specific to measurement, researchers used different coding schemes for content analyses (e.g., Hellerstein, 1985; Kiesler et al., 1984; McCormick & McCormick, 1992; Rice & Love, 1987), which made it difficult to compare the results of the different studies. At times, the coding scheme did not appear adequately sensitive for capturing the complexities of interpersonal exchange (e.g., Walther et al., 1994). It was also questionable that in data collection some researchers only used transcripts or text-based interaction to support the notion that face-to-face interaction had a richness that is unattainable in CMC (e.g., Kiesler et al., 1984). In addition, some researchers gathered data using questionnaires (e.g., McCormick & McCormick, 1992), but there was limited evidence of these as adequate instruments in terms of reliability and validity. Moreover, while some research was collected in the natural environment with an unclear sense of interaction history (e.g., Hellerstein, 1985; McCormick & McCormick, 1992), other research was done in a laboratory with zero histories among people interacting (e.g., Kiesler et al., 1984). Hence, there appear to be inconsistencies among researchers and an arbitrary decision about how much time to observe interaction and at what place in relationship development to observe exchanges. Although informative about the content of exchanges, it is not clear how representative the data are of real exchanges. There
were problems when face-to-face and CMC were observed using equal time periods since the rate of interaction was different for CMC and face-to-face communications, which was supported empirically by the meta-analysis conducted by Walther et al. (1994).

*Relational Communication*

In the field of counseling, there is a distinction made between the content and process of interpersonal exchange with content referring to the "what" and process to the "how" of interaction. In a similar way, within the field of communication there is the notion of relational communication. According to Burgoon and Hale (1984, 1987), all communication entails both a content and a relational level. Though the nature of intimacy online is the primary interest for the present research, the entire scope of relational factors is defined below followed by relevant literature. The relevant literature is evaluated throughout the discussion below, then summarized as a whole.

*Relational dimensions.* Specific to the relational level, there are twelve distinct yet interrelated dimensions that can also be viewed as message themes. These dimensions define the nature of interpersonal relationships. The first dimension, intimacy-nonintimacy, is an overarching factor comprised of: (a) involvement-noninvolvement, (b) affection-hostility, (c) depth-superficiality, (d) trust-distrust, and (e) receptivity-nonreceptivity (Burgoon, 1999). Each subfactor is defined below before describing the second dimension.

Included within the intimacy-nonintimacy domain is a subfactor of involvement-noninvolvement, which has various dimensions, most notable being immediacy. Immediacy is associated with a sense of closeness, desire for further conversation, and active engagement. Unlike immediacy, the conception of nonimmediacy refers to emotional uninvolvment and
emotional distance (Burgoon & Hale, 1984, 1987). There might be a sense that a communication partner is bored or otherwise uninterested and unresponsive. The immediacy dimension is related to affection, and in writing might take the form of words suggesting inclusion (e.g., an inside joke) or a word choice that is demonstrative and showing of affection (e.g., using the term "honey" or "sweetie") (Walther & Burgoon, 1992). The affection-hostility subfactor refers to the extent to which people like one another or are attracted to each other as well as having a desire for further communication. An affectionate interaction is characteristically relaxed while hostility is associated with a tense exchange (Burgoon & Hale, 1984, 1987). In written communication, hostility might be expressed through the use of capitalized letters or by language intensity (Walther & Burgoon, 1992).

Also within the intimacy-nonintimacy domain is the depth-superficiality dimension of relating. This has to do with the degree to which people stress similarities, express interest in a deeper level of relating, and the extent of superficiality in the relationship (Burgoon & Hale, 1984, 1987). Depth is characterized by a smooth rather than strained way of interacting as well as by self-disclosure. When writing, the depth dimension might emerge by using "we," private symbols, or self-disclosing statements (Walther & Burgoon, 1992). In addition to depth, there is a trust-distrust dimension of relational communication that people develop. This has to do with relating in an open way, having rapport, and being sincere, as well as by a person's desire to be trusted (Burgoon & Hale, 1984, 1987). Trust typically appears through cooperation rather than competitiveness. When writing, evidence of trust can take the form of self-disclosure, making vulnerable statements, and freely stating judgements. The freedom to state judgements is an indirect idea since it rests on the notion that people divulge in developed relationships.
(Walther & Burgoon, 1992). Closely related to the trust-distrust dimension is a sense of receptivity-nonreceptivity. When someone is receptive, the person is willing to listen, open to ideas, and reasonable in conversation. On the other hand, a person might be nonreceptive when unwilling to listen or by not staying open to what another person has to say. As with trust, the receptivity dimension might be evident by self-disclosure, but might also be through a written acknowledgement of what another communicated (Burgoon & Hale, 1984, 1987).

Beyond the intimacy-nonintimacy domain of relating is a second dimension, similarity-dissimilarity. Similarity is akin to identification. Three subfactors within the similarity-dissimilarity dimension are: (a) dominance-submission, (b) formality-informality, and (c) task versus social orientation. Dominance-submission has to do with someone's efforts to control, command, or persuade another person (Burgoon & Hale, 1984, 1987). Hence, when people are relating to one another interpersonally, the exchanges may be characterized by an attempt to have an upper hand or win favor, in which case there is an attempt to dominate and highlight inequality. Inversely, equality and submission connote a relationship characterized by mutual respect and cooperation. In writing, there can be a disproportionate amount of time that a person writes within an electronic discussion as well as manipulations to "have the floor" (Walther & Burgoon, 1992). Likewise, a person may state imperatives to or seek compliance from others (Burgoon & Hale, 1984, 1987). The next subfactor is formality-informality, which has to do with how relaxed versus punctilious interactions are. In writing, there may be evidence of formality if a person addresses someone else with terms like "Ms." or "Dr." as well as by the type of signature provided for an e-mail message. The task-social subfactor is closely
tied to the level of formality. There might be a series of exchanges in which a person focuses on tasks rather than social interaction (Walther & Burgoon, 1992).

The third and final dimension of relational communication is made up of two subfactors that are distinct but closely related. These are composure-noncomposure (equated with relaxation) and emotional arousal (components of positive and negative forms of arousal). The composure-noncomposure subfactor includes level of comfort, self-disclosure of personal information, and the level of sincerity and honesty (Burgoon & Hale, 1984, 1987). Emotional arousal refers to the degree of emotional expression. The subfactor includes low arousal, as is the case with boredom, and also higher arousal that comes with feelings such as anger or frustration (Burgoon & Hale, 1984, 1987).

When taken together, the different dimensions represent the broader construct of relational communication. Even though the subfactor of intimacy is of principal interest to the current study, it is important to demonstrate the psychometric properties of the relational communication scale (Burgoon & Hale, 1987) by reviewing the research on the instrument's development because the intimacy subscale is being used in the present research. In three studies, Burgoon and Hale (1987) used exploratory oblique and orthogonal factor analyses and confirmatory factor analysis to demonstrate the different relational themes. In addition, there is some predictive validity data for the relational communication scale they developed (Burgoon & Hale, 1987). Factor analytic work has shown that several of these themes can be combined into message composites (Burgoon & Hale, 1999).

Burgoon and Hale (1987) conducted a series of studies to develop an instrument based on their theory of relational communication (Burgoon & Hale, 1984), which was grounded in
research from biology, psychology, sociology, and communications. Specifically, there were three studies reported that were designed to validate the message themes central to defining interpersonal relationships and produce a reliable instrument. Each study is described below separately.

The first of Burgoon and Hale's studies had multiple goals: (a) to assess interrelatedness of the relational themes, (b) to create a reliable and valid instrument for self-report and observation, (c) to determine the ability of the different themes to discriminate different interaction conditions, (d) to test a model of violations of expectations, and (e) to examine the relationship between communication reticence and nonverbal and relational communication. The first three were of primary interest. Burgoon and Hale (1987) examined instruments used in previous research, and they created new items for themes that were not represented. The pool of 32 items was cast in a 7-point Likert format instrument, and both a self-report and observer forms were produced. Participants were 202 undergraduate students who were put into dyads and instructed to indicate what types of verbal and nonverbal messages they thought the other person communicated to them. Observers also rated the exchanges. Each participant came to the experiment with a friend, and the pair was separated to complete communication reticence scales. The participants were instructed that they would discuss two of four possible topics about social and moral problems, and they would be expected to reach a consensus about a course of action. They discussed one topic with their friend and one with a stranger, with the order of interactions and topics counterbalanced across dyads. Out of each pair, one student was designated as a "confederate." For one-third of the interactions confederates increased nonverbal immediacy, and for one-third of the interactions they decreased nonverbal
immediacy (i.e., moving closer/farther away, increasing/decreasing eye contact, leaning forward/backwards, facing partner directly/indirectly, open/closed posture). In the remaining third, the confederate was asked to maintain a natural communication style. All discussions were videotaped, and they lasted for no more than 9 minutes (Burgoon & Hale, 1987).

Participants completed the relational communication scale and other instruments related to violation hypotheses after the discussions. Videotapes were rated later by untrained observers who watched either the confederate or naïve participant and rated his or her relational communication toward the communication partner. The researchers stressed that although labels stress only one end of the message continuum, the dimensions represent a continuum. The factors that emerged were at time distinct as with dominance (competitiveness, aggressiveness, ingratiation, and persuasive intent). Another independent dimension was task vs. social orientation, and included being work-oriented, sincere, nonhostile, and reasonable, as well as being more interested in the social situation than the task. Formality emerged as a dimension, but it was less independent. It included items related to being responsive and disclosing, but it was modestly correlated with inclusion and involvement. Nonimmediacy/distance was a factor primarily concerned with creating a sense of emotional, social, and psychological distance. Related but distinct was the involvement/arousal factor that connoted activation. With other factors, several themes came together as with intimacy/depth/affection/trust, which included messages related to trust, liking, attraction, depth, and equality. Somewhat correlated with this factor was a factor of similarity/receptivity/inclusion, which entailed emphasizing agreement, lack of difference, rapport, and willingness to listen. An anomaly, honesty, emerged as a factor even though it was
expected to load with intimacy. One theme, composure, did not emerge as a separate factor as predicted, but the researchers believed that it was a more interrelated one than the other dimensions (Burgoon & Hale, 1987).

The orthogonal factor analysis initially produced four factors, and after dropping some items, the best solution retained 20 items that accounted for 51% of the variance. The retained dimensions were intimacy \((r = .81)\), involvement/arousal/inclusion \((r = .72)\), dominance \((r = .69)\), and nonimmediacy \((r = .46)\) (Burgoon & Hale, 1987). The coefficient alpha reliabilities, however, were low enough to indicate that more items were needed. Likewise, it was possible that the number of items was too small for the emergence of other dimensions.

In the second of Burgoon and Hale's studies, 300 undergraduates participated. Participants were asked to recall a dyadic conversation they had that lasted for 15 minutes, and then respond to a 68-item scale about their partner's verbal and nonverbal communications. The goal in creating the new items was to represent each theme by both positively and negatively worded items, which was intended to distinguish between content and degree of positive wording as controlling the factoring. Similarly, they wanted to learn about the unidimensionality of some factors. As in the first study, data were analyzed by oblique and principle components factor analyses with varimax rotation. In the second study, however, there were 9 factors that accounted for 59% of the variance. The factors were: (a) receptivity/inclusion/trust, (b) persuasion/ingratiation, (c) dominance/similarity, (d) arousal/intensity of involvement, (e) task vs. social orientation, (f) formality, (g) nonimmediacy, (h) composure, and (i) intimacy. The orthogonal solution again produced a four factor solution, which when reduced to 28 items that accounted for 58% of the variance. The
four factor solution included: (a) arousal/composure/formality/task oriented (i.e., activity and activation that is either positive or negative and presented with formality and task orientation), intimacy/similarity (i.e., communication of trust, receptivity, and familiarity), nonimmediacy (i.e., underscores the distinction between the closeness or distance that signal attraction and liking and closeness or distance as a signal of engagement and involvement), and dominance (i.e., persuasion and ingratiation) (Burgoon & Hale, 1987).

In the third study, Burgoon and Hale modified the 68-item scale to include positive forms of arousal and reduce the pool of items to an efficient but reliable set of subscales, which resulted in 60 items. In this study, 145 undergraduates served as interviewers in a simulated interview with confederate interviewees who were assigned to one of two different levels of reward and three levels of gaze. Following the interviews, participants evaluated the interviewer. The six different conditions ensured that the relational messages scale was responded to under various conditions that permitted determining how well the subscales discriminated communications. Although the sample size made analysis less stable, an oblique factor analysis was conducted as a first step to reduce the pool of items. A number of solutions were reported as interpretable, and the solution produced ten factors that accounted for 57% of the variance. Based on the loadings, the pool was reduced to 30 items, which were subjected to orthogonal factor analysis, confirmatory factor analysis, and reliability analysis. The orthogonal analysis produced seven independent factors, which were subjected to least square confirmatory analysis. The data fit the solution, but since four items were not internally consistent, the items were reduced to 26 items. The 26-item measure yielded alpha reliabilities of .81 for immediacy/affection, .77 for similarity/depth, .76 for receptivity/trust, .80 for
composure, .61 for formality, .66 for dominance, and .52 for equality. The researchers concluded that the seven dimensions represented a refinement over the four factor solutions previously produced (Burgoon & Hale, 1987).

Since the 30- and 26-item scales reduced individual dimensions below an optimum level, Burgoon and Hale (1987) recommended adding items from the 68-item instrument when using subscales. Although the researchers did not report other studies listed below in detail, they mentioned supplemental research that used the 68-item and the 32-item versions. Burgoon, Manusov, Mineo, and Hale (1985, as cited in Burgoon & Hale, 1987) used the instrument to test the effect of eye contact violations on hiring, credibility, attraction, and perceived relational communication with job applicants. They obtained a four factor solution, the reliabilities of which were .74 for arousal/composure/formality, .86 for intimacy/similarity, .83 for nonimmediacy, and .76 for dominance. The results reported demonstrated that high degrees of gaze were found to communicate composure and informality, increased intimacy and similarity, and increased immediacy when compared with gaze aversion. Research by Burgoon, Buller, Hale, and de Turck (1984, as cited in Burgoon & Hale, 1987) involved observers who rated the meaning of distance, gaze, touch, body lean, and smiling as they were varied on videotaped interactions. Reliabilities for the scales were .86 for intimacy, .79 for nonimmediacy, .76 for involvement/arousal/inclusion, and .60 for dominance. The four sets of message scales differentiated between high and low amounts of immediacy on two or more dependent variables (Burgoon & Hale, 1987).

Relational view of CMC. As stated in a previous section, there was a belief that CMC had a lack of cues and context needed for a socioemotional exchange between people. Yet,
researchers found that people communicated socioemotional content, even in studies where this was not expected to be the case (e.g., Kiesler et al., 1984; Rice & Love, 1987). As such, Walther (1992) proposed that CMC was relational since people innately develop social relationships in all interactions. There are various studies that support this notion.

Walther and Burgoon (1992) used a repeated measures design to determine the level of relational communication with 16 CMC and 16 face-to-face three-member groups. The sample consisted of 96 undergraduates, divided into sixteen groups, who were assigned randomly to one of two conditions, a 3-person face-to-face or 3-person CMC condition. Since the groups had no previous contact, and the researchers wanted the participants to put forth effort, there was incentive for the students. Their participation was evaluated as part of their course grade.

The participants in the CMC condition were trained on the computer conferencing system (COSY), a text-based communication medium, which was a nonsimultaneous (asynchronous) system that did not require the users to be on-line at the same time. Users could access group entries previously unread 24 hours a day with a personal computer. The CMC groups were asked to make three decision-making tasks over a 5-week period. The order of tasks was counterbalanced across groups, and there were deadlines announced. After each task was completed, the participants completed dependent measures (Walther & Burgoon, 1992).

The face-to-face participants were instructed to attend three meetings over a five-week period. They were to complete a task each time they met for scheduled two-hour meetings, though none took more than 70 minutes. Participants had nametags and materials needed for the task at hand. Participants were separated within the room after each task to complete the research instruments. The group tasks were the same for both face-to-face and CMC
participants, and in both conditions, when one participant failed to participate, the entire group was dropped (Walther & Burgoon, 1992).

Walther and Burgoon (1992) used the questionnaire about relational communications created by Burgoon and Hale (1987) in this study. Data were subject to various analyses, the first of which was group effect. Several variables showed intraclass correlations, which made it apparent that group members' behavior was affected by other members of their respective groups. Further analyses revealed effects for group-within-condition on most relational dimensions. Analyses were also done to verify if the number of message exchanges across conditions were near-equal intervals of face-to-face and CMC message exchange, which was done using coders who were trained in determining what made a message unit. Rater reliabilities were estimated at .95, and no differences were found as a result of video versus CMC transcript coding. Hence, the message frequencies across the different communication modes were equivalent (Walther & Burgoon, 1992).

Walther and Burgoon (1992) reported numerous hypotheses for their findings within the relational communication dimensions. In terms of immediacy/affection, both face-to-face and CMC conditions had mutual development over time, and although face-to-face appeared higher in time one than CMC, there were no significant differences between the groups at time 1. Similarity/depth in both conditions had an overall linear increase over time. Initial messages in CMC were lower in composure/relaxation than later messages as was the case in face-to-face groups. There were no differences in similarity/depth between the conditions at time 1 even though this was expected. With respect to formality, both CMC and face-to-face groups became less formal, and approached a similar level over time. CMC was rated as less dominant
in later exchanges than initial ones, and groups were similarly dominant in their first interactions. After the first interaction, however, the face-to-face groups had increased dominance while the CMC declined. By the third measurement there was eventual convergence with groups looking similar on the dominance dimension. For both conditions there was an overall linear increase in attempts to influence the groups over time. There was no perception of greater equality in CMC than face-to-face at time 1. With respect to receptivity/trust, CMC groups increased in their receptivity/trust over time. Contrary to what was expected, face-to-face groups were not higher in the receptivity/trust dimension at time 1 than CMC groups. Although both CMC and face-to-face conditions increased in receptivity/trust over time, the face-to-face condition had a plateau-type increase while the CMC groups had a linear increase that reached a similar level as the face-to-face groups at the last measurement. Both groups were less task oriented than time 1, however, CMC was less task oriented than face-to-face groups throughout (Walther & Burgoon, 1992).

What makes this experiment relevant to the current research was that time rather than the medium appeared to have a significant main effect for almost every outcome. In other words, the conditions of face-to-face and CMC did not differ over time, which supported the notion that the condition was not what dictated the level of relational communications. Therefore, given enough time, minor differences in relational communications became inconsequential (Walther & Burgoon, 1992).

For all relational communications initially, there were few differences between the groups. Likewise, the participants in both conditions had an increase in relational communications that were similar in their level of affiliation. Hence, few differences occurred
between the conditions with the exception that CMC groups were more socially oriented (Walther & Burgoon, 1992). CMC participants' ratings of composure, informality, and dominance ratings were lower than the face-to-face group. The findings were contradictory to what the social presence, cues filtered out, and media richness theories of CMC and socioemotional exchange would predict. Walther and Burgoon (1992) provided evidence that CMC groups develop in a positive direction relationally. Further, it was the effect of time, or message accumulation, rather than communication mode that was responsible for the changes in participant ratings of relational communication (Walther & Burgoon, 1992).

In critiquing the experiment, Walther and Burgoon (1992) compared the actual face-to-face interactions with CMC exchanges unlike previous studies that used only text-based transcripts as the face-to-face condition (e.g., Kiesler et al, 1986). They used a design that allowed them to determine the role of time and communication medium on relational communications. Walther and Burgoon (1992) explicitly described the procedures they followed, which allowed them the experimental control necessary to draw conclusions in the field-based, quasi-experimental design. They used a factorial design, and their ANOVA analysis with post hoc analysis was appropriate for identifying interaction effects and main effect analyses. With respect to instrumentation, Walther and Burgoon (1992) subjected the data to factor analytic approaches, which were described previously in Burgoon and Hale (1987), to validate further the psychometrics of the 60-item version of the instrument. The factors and alpha reliability coefficients were: (a) immediacy/affection ($r = .88$), (b) similarity/depth ($r = .80$), (c) composure ($r = .87$), (d) formality ($r = .89$), (e) dominance ($r = .86$), (f) attempted influence ($r = .78$), (g) equality ($r = .82$), (h) receptivity/trust ($r = .84$),
and (i) task-social orientation \((r = .80)\). Hence, there was evidence of validity and a reliability estimate exceeding .80 for the instrument, making the measurement of the dependent variable reasonably accurate. The investigators also used coders to equate the number of message exchanges for nonsimultaneous CMC group interactions with the simultaneous face-to-face groups, and inter-rater reliabilities exceeded .95 (Walther & Burgoon, 1992).

One criticism of Walther and Burgoon's research was a lack of experimental control over the simultaneous and nonsimultaneous exchanges. Since these communication mediums qualitatively differ, the experimental conditions were not held constant for the face-to-face and CMC groups, which created a confound. On the other hand, this confound was inevitable given the nature of comparing face-to-face and CMC, and might also be considered a maximization of the variation between the two conditions (Walther & Burgoon, 1992). It was also possible that observed changes in the relational dimensions reflected maturation of participants as opposed to differences in communication performance. Similarly, the measures were repeated three times over 5 weeks making it possible that changes in self-report might reflect the practice effects of taking the instrument.

Walther (1995) reported on the 192 outside observers who analyzed the CMC and face-to-face interactions of 96 participants who were assigned to 3 member groups in the study by Walther and Burgoon (1992). As described above, the CMC groups communicated using a nonsimultaneous conferencing system, and the face-to-face group members met at a designated place and time. Both worked on specific tasks over a five-week period. The coders were then asked to read transcripts and view videotapes of the small group exchanges, and then complete the observer form of the relational communication scale (Burgoon & Hale, 1987).
Results showed that according to the raters, the CMC groups reached more positive levels on all intimacy communications (i.e., immediacy, affection, similarity, depth, composure, and relaxation) than the face-to-face participants did. CMC groups also had greater social orientation versus task orientation than the face-to-face condition. In other words, the assumption that asynchronous (nonsimultaneous) CMC was impersonal and task-oriented was not supported (Walther, 1995).

Methodologically, Walther (1995) pointed out that the trained coders included nonverbal behavior as part of the coded data for face-to-face groups. Obviously, the same source of nonverbal communication was not available through CMC, and in some previous research (e.g., Kiesler et al., 1984) only the verbal content of face-to-face audiotape or transcript were used to compare the media. In the cases where nonverbal cues were excluded from analysis, there was a systematic omission of the theoretical richness that face-to-face interaction has (Walther, 1995).

In another study by Walther (1994), the focus was on whether or not people related differently when they anticipated future interaction than when they did not expect to interact in the future. Like Walther and Burgoon (1992), the study by Walther (1994) used CMC and face-to-face groups. In the experiment, 114 student participants were assigned to meet through face-to-face or computer conferencing in a group of three. They were randomly assigned to one of three communication conditions, which were face-to-face, synchronous (real time) CMC, or asynchronous (nonsimultaneous) CMC. The three person groups were randomly assigned to anticipation versus no-anticipation of ongoing interaction manipulations (Walther, 1994).
All were told that they would work on three tasks over six weeks. To vary the anticipated future interaction, students were either told that they would work with the same three-person group for the tasks or that they would have different group members each time. This was the arrangement for both CMC and face-to-face conditions. The nonsimultaneous CMC group used a conferencing system (Vaxnotes) that allowed them to comment at their time of choosing. The simultaneous CMC group used the same conferencing system (Vax), but used a different option (i.e., the "phone" mode) to allow for real time interactions. In both CMC conditions the students received training about the systems they used. Participants addressed various tasks that were about academic policy dilemmas, which were the same problems used in the research by Walther and Burgoon (1992). All were asked to review the dilemmas, discuss alternatives, and make recommendations. In contrast, the face-to-face groups used printed instructions and met in specified rooms that were set-up to resemble a conference arrangement, but that had a one-way mirror. For all groups, the participants completed dependent measures following the completion of each task (Walther, 1994).

The instruments that they used included a measure on relational communications (Burgoon & Hale, 1987), which was discussed above, and another about perceived anticipation of future interaction. Since the relational communication measure was already described, the present review only includes the latter. The researcher created a scale to assess actual anticipation that included items about their expectation of recognizing other group members in various situations, which were based both in theory and from interviews with an offset participant group. The instrument was subject to a factor analysis that yielded a unidimensional factor solution that reflected the expectancy and recognition dimensions. The alpha reliability
coefficient estimate was .78. For the relational communication instrument, the alpha reliabilities were immediacy/affection .93 (14 items), similarity/depth .75 (9 items), receptivity/trust .78 (7 items), composure/relaxation .80 (7 items), and task-social orientation .80 (4 items) (Walther, 1994).

After one meeting, the long-term and short-term groupings were different for the computer conference participants as hypothesized. The length of partnership had more of a difference for both CMC groups than face-to-face partners on the degree of anticipated future interaction they experienced. The communication media affected anticipated future interaction, and anticipation was differentially amenable to the effect of long- versus short-term assignment. The relatively impersonal interactions of one-shot CMC groups in earlier research (e.g., Kiesler et al. 1986), compared to one-shot face-to-face exchanges, might be explained by the expectation of future interactions rather than the CMC medium, which was presumed to be impersonal. The analysis of relational communication dimensions showed that only asynchronous CMC differed from face-to-face on immediacy/affection, similarity/depth, receptivity/trust, and composure/relaxation (Walther, 1994).

Walther (1994) used a multiple regression analysis, regressing each dependent variable on effects of anticipation, condition, and their interaction, to account for variation by anticipation. The main effects were run first, but interaction effects were run to determine if interaction effects accounted for a significant amount of variance beyond the main effect. If the interaction was not significant, analysis returned to main effects. The results included the findings that: (a) anticipation associated with immediacy/affection was a better predictor of immediacy than was communication channel; (b) anticipated future interaction was associated
with similarity/depth, but the condition was not significant; (c) anticipation was associated with receptivity/trust, but condition was not a significant factor; (d) anticipation affected composure, but the condition was not significant; and (e) anticipation had no effect on social orientation in any condition (Walther, 1994).

Although the research was not done for counseling specific purposes, the evidence suggested that CMC acts as a moderator, and people come to expect or not expect ongoing interaction with communication partners via CMC. Likewise, this moderation takes place more in CMC than face-to-face communication. The results also provided evidence that the actual anticipation of future exchanges using CMC and face-to-face meetings accounts for intimacy and composure, and that communication medium has little effect once anticipation was accounted for. When considering immediacy/affection, similarity/depth, receptivity/trust, and composure/relaxation, the communication condition did not account for a significant amount of variance once anticipation effect was removed. Specific to the current research, these findings indicated was that it was not a narrow bandwidth or lack of social cues inherent to CMC that accounts for the quality of relationship between people. Rather, the medium of CMC might allow for relationship quality when the people interacting anticipate further exchanges (Walther, 1994).

Walther (1994), Walther (1995), and Walther and Burgoon (1992) included research practices that were intended to control internal validity despite the field-based nature of the investigations. For example, methods included taking into account the training that conference participants had in using a system along with providing training to use the conferencing system. Likewise, there was a prescribed way to introduce group members, which conformed to
guidelines for research using zero-history partners, as well as some incentive to motivate participants to reach the outcome of assigned tasks (Walther, 1994, 1995; Walther & Burgoon, 1992). Participants were assigned numbers then randomly assigned to conditions of face-to-face or CMC group (Walther, 1994, 1995; Walther & Burgoon, 1992). Walther (1995) presented the order of video and written transcripts in varying order to observers doing data coding. Walther (1994) and Walther and Burgoon (1992) used multiple perspectives for the ratings of interactions that included participants and outside observers. There was an attempt to verify that the number of message units exchanged did not vary by condition or task as a way to address the confound in comparing face-to-face (simultaneous) and CMC (nonsimultaneous) interactions. The data that were analyzed included all channels of the face-to-face communication modes rather than having face-to-face interaction transcribed then analyzed (Walther, 1995).

As a criticism of Walther and Burgoon's (1992), Walther's (1994), and Walther's (1995) research, the participants or observers in Walther (1995) completed questionnaires each time they completed the tasks assigned to them. The repeated measures design could present a measurement bias. Likewise, in the face-to-face conditions, the video camera was in view, which could prompt reactivity from participants (Walther & Burgoon, 1992). In a later study Walther (1994) had the video behind a one-way mirror, which was an improvement since the video was not in sight. It could be argued that the findings were a result of maturation or selection since there was no control group or pre-test as part of the design.

**Summary.** The research provided evidence that CMC exchanges did not lead to negative or hostile interactions very often. In contrast, there was evidence that people manage to adapt to
a CMC environment to an extent that might be comparable to a face-to-face exchange. It appears that people are capable of developing relationships and forming impressions of each other in a text-based medium, especially when they anticipate continued exchanges. The evidence provided, however, is based on data collected from either casual or work-focused exchanges. The question in the current study centers on the quality of relationships when the focus of one's work is socioemotional in nature, as is the case with counseling.

*The Therapeutic Relationship*

The quality of the relationship between client and counselor has been found to have a major effect on positive therapy outcome (Sexton & Whiston, 1994). It is important first to define what constitutes a psychotherapeutic relationship. After the counseling relationship is defined below, research findings specific to the working alliance are presented since the working alliance is most relevant for the current study.

The therapeutic relationship has three main components: a transference configuration, a real relationship, and a working alliance (Gelso & Carter, 1994). The first component, a transference configuration, includes client transference and therapist countertransference. Transference is “the repetition of past conflicts with significant others, such that feelings, attitudes, and behaviors belonging rightfully in those earlier relationships are displaced on the therapist” (Gelso & Carter, 1994, p. 297). In contrast, countertransference is the “therapist’s transference to the client’s material, both to the transference and nontransference communication presented by the client” (Gelso & Carter, 1994, p. 297).

The second component, the real relationship, centers on the features of the relationship that are not distorted. It has the defining features of genuineness and realistic perceptions.
Genuineness is the “ability and willingness to be what one truly is in the relationship to be authentic, open, and honest” (Gelso & Carter, 1994, p. 297). Realistic perceptions are “uncontaminated by transference distortions and other defenses” (Gelso & Carter, 1994, p. 297).

The final component, the working alliance, is the most fundamental if counseling is to proceed effectively or at all (Gelso & Carter, 1994). The alliance is the alignment or joining of the client’s and therapist’s selves for the purpose of the work. Likewise, the strength of the alliance is effected by and affects the extent to which therapist and client agree on the goals of counseling work, concur on tasks useful in attaining goals, and experience an emotional bond with each other (Gelso & Carter, 1994).

The working alliance. There is significant interest in verifying the alliance empirically. In their review of the literature, Sexton and Whiston (1994) outlined that research about the working alliance included studies done to develop multiple measures of the alliance, the relationship of the alliance to outcome, client factors in the alliance, and counselor factors in the alliance.

The different alliance measures are mentioned first. Various instruments have been developed to measure the working alliance such as the Penn Helping Alliance Scale (HAQ) (Luborsky, Crits-Christoph, Alexander, Margolis, & Cohen, 1983, as cited in Sexton & Whiston, 1994), the Vanderbilt Therapeutic Alliance Scale (Hartley & Strupp, 1983, as cited in Sexton & Whiston, 1994), The California Psychotherapy Alliance Scales (CALPAS) (Marmar, Weiss, & Marmar, 1987, as cited in Sexton & Whiston, 1994), and The Working Alliance Inventory (WAI) (Horvath & Greenberg, 1989, as cited in Sexton & Whiston, 1994). On a
practical level, what distinguishes the measures from each other are the perspectives from which the alliance is measured (i.e., client, therapist, observer) as well as the extent of training required to use the instruments. For example, the Vanderbilt Therapeutic Alliance Scale (VTAS) and the Therapeutic Alliance Rating System (TARS) requires criterion level training of observers, and the Penn Helping Alliance Scale (HAQ) requires clinically experienced raters who must refer to manuals for scoring. In contrast, the Working Alliance Inventory requires no training of the therapist, client, or observer to complete the form (Horvath, Greenberg, & Pinsof, 1986). Even though there are different approaches to measuring the concept, there is consensus that the alliance involves both collaboration between participants and capabilities to negotiate a contract for therapy (Sexton & Whiston, 1994). Although the instrument developers refer to a working, therapeutic alliance, the instruments appeared to measure similar constructs (Horvath & Symonds, 1991; Tichenor & Hill, 1989). The current literature review will focus on the working alliance.

In a meta-analytic study, Horvath and Symonds (1991) examined 24 studies in an attempt to identify how the working alliance was linked to therapy outcomes. The working alliance ratings were gathered from client, counselor, and observer perspectives. The researchers found that the working alliance was significantly related to therapy outcome. Likewise, observer and client measures of the working alliance were better predictors of the outcomes than measures completed by therapists. Early (i.e., one to five sessions) and late measures of the working alliance were not significantly different, making early measures as predictive of outcome as later measures. They also suggested that because the sample reflected different forms of therapy and measures, the construct might be present in all therapeutic
approaches. They note, however, that since different systems of measure were used, it was difficult to know exactly what construct was being measured (Horvath & Symonds, 1991).

To address concerns voiced by Horvath and Symonds (1991) about what construct was measured, Hatcher and Barends (1996) had 231 clients complete three working alliance measures (HAQ, WAI, CALPAS), and then subjected the clients' ratings to a factor analysis. The researchers expected and confirmed that the three working alliance ratings highly correlated. Hatcher and Barends (1996) further reported that when all three instruments were combined and analyzed, 68% of the variance was accounted for by one strong, general factor. When all three instruments' items were subject to a factor analysis, six factors emerged. The first was termed confident collaboration, and referred to clients' confidence and commitment to a process that feels helpful. The second factor was termed goals and tasks, and consisted primarily of WAI goals and tasks subscales. The third factor was bond, which referred to client and counselor liking and respecting each other. The fourth factor that emerged was termed the idealized relationship. The factor consisted of items reflecting a sense of helpful collaboration and items reflecting disagreement with the therapist. A fifth factor was labeled the dedicated patient, and referred to negative aspects of client participation. The final factor identified was help received, which reflected outcome items about changes noticed and beliefs that the therapy will work. From the combined analysis, the researchers reported that the WAI goals and tasks loaded on one factor with bond items loading on a second. The CALPAS was determined to have three factors instead of its postulated eight factor structure. The majority of CALPAS subscales loaded on the confident collaboration factor, but remaining items loaded on idealized
therapist and dedicated patient factors. The HAQ items loaded on four factors with the joint analysis unlike its expected two factor structure (Hatcher & Barends, 1996).

Although their research was conducted with an adequate sample size, the counselors involved had varying amounts of experience (under one year to four years). This made it difficult to determine if some of the clients' ratings were related to counselor experience (e.g., clients feeling confused about goals due to clinicians who had not yet mastered some technical aspects of counseling). Likewise, the working alliance measures were collected at various points in the therapy process, which could have influenced the strength of the working alliance since the working alliance generally strengthens with time (Hatcher & Barends, 1996).

Hatcher and Barends (1996) concluded that the alliance measures required revision, and they offered suggestions on how to do such revisions. One of the revisions is salient to the current research, which was the recommendation that researchers should use a broader conceptualization of the bond in alliance measures. They specified that items reflecting a more affective and interpersonal nature were needed. The researchers wrote that an area that was lacking in the working alliance scales was in regard to a patient's freedom to express positive and negative affect and the therapist's willingness to facilitate and welcome those feelings. Other aspects that they recommended was the client's wish to feel closer to the counselor, client concerns about safety and being judged, and clients' perceptions of the counselor's power. The implication for the current research is that it is necessary to use more than a working alliance measure to measure whether a bond can form between counselor and client when communicating through text-based CMC for counseling.
Additional research provides data about the working alliance and counseling outcomes. For example, 29 client and counselor dyads did short-term individual counseling (fewer than 15 sessions), and rated the working alliance using the WAI. The working alliance evident in the third session was related to client change and satisfaction (Horvath & Greenberg, 1986, as cited in Sexton & Whiston, 1994). In a clinical setting with experienced counselors, both clients ($N = 144$) and counselors ($N = 15$) were asked to rate the working alliance. The level of the working alliance after session one did not discriminate between clients who withdrew or stayed in therapy, and the working alliance was established by session one (Kokotovic & Tracey, 1990, as cited in Sexton & Whiston, 1994). In contrast, Strupp (1990, as cited in Sexton & Whiston, 1994) reported the results of a case study that documented that the failure to form an working alliance early in therapy resulted in client termination because the client felt misunderstood. Yet, other research demonstrated evidence that when the working alliance was present in session one, it not only remained constant throughout therapy, but the working alliance was also higher for medium length than short term treatment. There also was a relationship between symptom changes and the amount of time clients ($N = 40$) remained in therapy (Eaton, Abeles, & Gutfreund, 1988, as cited in Sexton & Whiston, 1994). The working alliance also was found to be related to therapy involvement, acceptance of pharmacology intervention, and decreased therapy drop out rates for persons with schizophrenia (Frank & Gunderson, 1990, as cited in Sexton & Whiston, 1994). For therapists working with persons addicted to opiates, the working alliance was found to be related to therapist characteristics and technical skills, which were related to successful client outcomes (Luborsky, McLellan, Woody, O'Brien, & Auerbach, 1985, as cited in Sexton & Whiston, 1994).
The next body of research related to the working alliance is about client factors. Sexton and Whiston (1994) noted that this topic was not only studied in terms of the relationship between client pretreatment symptoms but also as general client characteristics. Specific to pretreatment symptoms, Sexton and Whiston (1994) reported that there were conflicting findings. While some researchers found no relationship between symptoms and the clients' abilities to form a working alliance (e.g., Mallincrodt & Nelson, 1991, as cited in Sexton & Whiston, 1994), other researchers found weaker working alliances when clients had more extreme symptoms (Kiesler & Watkins, 1989, as cited in Sexton & Whiston, 1994). Specific to client characteristics and working alliance development, there was evidence that the client's capacity for interpersonal relationships was predictive of positive contribution to the working alliance (Klee, Abales, & Muller, 1990, as cited in Sexton & Whiston, 1994). Likewise, Kokotovic and Tracey (1990, as cited in Sexton & Whiston, 1994) found that the quality of clients' current relationships with family was related to an ability to form a working alliance.

The final working alliance related area of research has to do with counselor factors in the working alliance development. According to Sexton and Whiston (1994), few studies addressed the counselors' contributions to the working alliance. The exception to the trend was a series of analogue studies reported by Kivlighan (1990, as cited in Sexton & Whiston, 1994). The results provided some evidence that counselor technical activity accounted for one third of clients' working alliance ratings. When counselors attempted to get information and encourage or support the client, the working alliance ratings were lower. In contrast, working alliance ratings were higher when counselors were challenging, here and now focused, and thematically oriented (Kivlighan, 1990, as cited in Sexton & Whiston, 1994). One obvious drawback to the
findings was the analogue nature of the research in which counselors were novices and clients were student volunteers (Sexton & Whiston, 1994). In a different study, Mallinckrodt and Nelson (1991, as cited in Sexton & Whiston, 1994) discovered that as counselor experience increased, the goal and task dimensions of client working alliance ratings increased. Bachelor (1990, as cited in Sexton & Whiston, 1994) reported that a supportive and collaborative environment of the counselor accounted for nearly half of outcome variance from the clients' perspectives.

In summary, the working alliance exists for collaboration about counseling work, and it accounts for variance measured in client therapy outcomes. It is not a mechanism for change, but rather a foundation (Sexton & Whiston, 1994). Over the course of therapy, early measures (i.e., one to five sessions) of the working alliance are as predictive of outcome as are measures taken later in treatment (Horvath & Symonds, 1991). A number of factors mediate the role of the working alliance (Hatcher & Barends, 1996; Sexton & Whiston, 1994). The extent to which the working alliance is linked to outcome depends to some extent on who completed the working alliance ratings with client and observer ratings being more related to outcomes than counselor ratings. The length of therapy might also influence working alliance development (Sexton & Whiston, 1994). Finally, the working alliance-outcome link is independent of counselors’ theoretical orientation (Horvath & Symonds, 1991).

Methodologically, most of the studies on the working alliance were conducted in clinical settings, which provides some evidence for validity in practice (e.g., Bachelor, 1991, as cited in Sexton & Whiston, 1994; Eaton et al., 1988, as cited in Sexton & Whiston, 1994; Frank & Gunderson, 1990, as cited in Sexton & Whiston, 1994; Horvath & Greenberg, 1989; Klee et
al., 1990, as cited in Sexton & Whiston, 1994; Kokotovic & Tracey, 1990, as cited in Sexton & Whiston, 1994; Luborsky et al., 1985, as cited in Sexton & Whiston, 1994). Quasi-experimental designs, however, can have multiple threats to internal validity given the lack of experimental control.

_Counselor assumptions._ According to a review of the literature, there is evidence spanning over 40 years that focuses on how counselors' theoretical orientation influences counseling practices (Poznanski & McLennan, 1995). At a basic level, theoretical orientation refers to an organized system of assumptions. These provide a "theory based framework for (a) generating hypotheses about a client's experience and behavior, (b) formulating a rationale for specific treatment interventions, and (c) evaluating the ongoing therapeutic process" (Poznanski & McLennan, 1995, p. 412). A counselor is presumed to base therapeutic practice on the theoretical tenets, even though the degree to which an individual counselor bases practices on theory varies. Likewise, a practitioner may ascribe to more than one orientation. For clarity of this discussion, a brief overview is included below in which the construct of theoretical orientation is defined along with relevant history.

When looking in counseling theory textbooks, it is common to see orientation represented by labels such as psychodynamic, cognitive, or behavioral (e.g., Corey, 1996). Although these schools of thought reflect sociopolitical and historical contexts within which they evolved, these labels do not capture the underlying constructs that discriminate among these different schools of thought. By simply asking clinicians to state their theoretical orientations by identifying a school of thought, there is an incomplete picture of what belief systems counselors truly have about practice (Poznanski & McLennan, 1999).
There have been several attempts to conceptualize these underlying constructs (Poznanski & McLennan, 1995). For example, Allport (1955, as cited in Poznanski & McLennan, 1995) proposed a dichotomous framework differentiating between a Lockean tradition (i.e., objective, elemental, behavioral) and Leibnizean view (i.e., subjective, holistic, experiential). However, according to Sunland (1977, as cited in Poznanski & McLennan, 1995), there are more than two dimensions differentiating theories including those of science-art, analysis-holism, mechanical-organism, rationalism-intuitionism, and positivism-existentialism. Therefore, there appear to be several thoughts about what constitutes the factors that form counselors' attitudes, beliefs, preferences, and practices (Poznanski & McLennan, 1995).

The first systematic attempt to define counselor theoretical orientation was a seminal work by Sunland and Barker (1962) in which they argued that differences between theoretical systems were relatively inexplicit. Initially, they proposed 13 attitudinal subscales, but after testing their ideas the authors reported three factors, A, B, and C, as well as a general factor that cut across the majority of the subscales (Sundland & Barker, 1962). According to the authors, the "general factor must be considered the most significant single continuum upon which to compare therapists" (Sundland & Barker, 1962, p. 205) The general factor had two poles, the analytic and experiential. The analytic pole emphasized conceptualizing, specific training, a planned approach, attention to unconscious process, and restricted therapist spontaneity. The experiential pole focused on therapist personality, an unplanned approach, and therapist spontaneity (Sundland & Barker, 1962).
A second attempt to derive empirically the theoretical orientation construct was proposed by Coan (1979). Coan included eight factors: (a) factual-theoretical, or the extent to which counselors use an empirical view as opposed to a speculative one; (b) impersonal causality-personal will, or the degree to which a counselor views behavior as predictable and under lawful regularity or as a consequence of choice; (c) behavioral-experiential, in essence how much a counselor values conscious experience as the most important data; (d) elementarism-holism, which contrasts theoretically based global patterns with research focusing on elementary relationships of variables; (e) biological determinism that attributes behavior to inborn predisposition; (f) environmental determinism, which emphasizes social environment as a source of individual differences; (g) physicalism, or the view of behavior in terms of observable physical events; and (h) quantitative-qualitative, or the counselors' degree of favoring systematic research methodology. In addition, Coan identified second-order factors that emerged when combining the eight scales. The factors were: (a) objective-subjective, which contrasts observable, objective, and factual data with subjective, introspective, and experiential data; and (b) endogenism-exogenism, which centers around individual tendencies to attribute cause of behavior to internal or external sources.

The most recent attempt to define the theoretical orientation construct is by Poznanski and McLennon (1999). This approach is not only based on both Sundland and Barker (1962) and Coan (1979), but it also incorporates ideas from a family/systemic school of thought, one that was not incorporated in the earlier writings. According to Poznanski and McLennon (1999), previous attempts
represent important superordinate epistemological dimensions of beliefs about
counseling. The first dimension, probably most aptly described as Rational-Intuitive, is
concerned with a counselor's preferred mode of knowing in terms of an emphasis either
on (a) rational judgement (logical and analytical reasoning) or on (b) intuition. The
second dimension, Objective-Subjective, is concerned with a counselor's preferred style
of knowing in terms of an emphasis on a view of reality which is characterized by either
(a) rationalism (reality as logical consistency) and empiricism (reality as observable
events), or (b) subjective experience (reality as metaphorism and symbolism. (p. 327)
Poznanski and McLennon (1999) constructed the Counselor Theoretical Position Scale
(CTPS) by using the items making up the Analytical-Experiential scale of Sundland and
Barker's (1962) TOQ and the Objective-Subjective scale of Coan's (1979) TOS. Items that were
narrowly related to very specific techniques were discarded, which resulted in 17 items from
the existing scales. An additional 6 items were derived from writings that described
commonalities and differences across various approaches to counseling. Items are presented on
a 7-point scale (i.e., completely disagree to completely agree), and high subscale scores
represent stronger preferences for Rational and Objective beliefs (Poznanski & McLennon,
1999).

To evaluate the adequacy of the scale, Poznanski and McLennon (1999) analyzed the
responses of 132 members of the Australian Psychological Society. The sample consisted of 76
women and 56 men with a mean age of 41.1 years. The mean years of experience was 15.3
years. Participants completed the scale described above along with their self-ascribed
theoretical perspective on a 10-point scale (1 = never, 10 = always) (Poznanski & McLennon, 1999).

Since the item loadings represent the theoretical two-factor solution, there was evidence of construct validity. The CTPS was subject to a factor analysis with principle component and varimax rotation that indicated that a two-factor solution was appropriate. The loadings were a minimum of .30. The internal consistency coefficients were .87 for Objective-Subjective and .81 for Rational-Intuitive subscales. The researchers also provided evidence of criterion-related validity. Specifically, they correlated the self-ascribed adherence to theoretical counseling approach with the CTPS scores. The calculated correlations consisted of self-ascribed theoretical perspective (point-biserial correlations) and ratings of degree of adherence to the principles of each major theoretical position. The coefficients were consistent with the predictions that self-ascribed cognitive-behavioral counselors have the highest mean scores on rational-intuitive and objective-subjective scales. Self-identified psychodynamic practitioners have the lowest mean scores on the rational-intuitive subscale, while experiential/phenomenological practitioners scored lowest on the objective-subjective subscale. Counselors who self-identified as adhering to a family/systemic orientation had intermediate scores on both subscales, reflecting as assumed moderate emphasis on subjectivity and rationality (Poznanski & McLennon, 1999).

In the current study, the discussion of theoretical orientation is relevant because the acceptability of doing counseling by CMC, and subsequent measurements of a working alliance, might be biased by counselors' theoretical assumptions. Therefore, clinicians' theoretical positions are likely to be a co-variate of working alliance measures. As is described
in more detail above, the working alliance formed between counselor and client consists of
developing therapy goals, engaging in agreed upon tasks, and developing emotional bonds.
Counselors identify goals and engage in tasks that fit with their theoretical assumptions. Put
simply, it is likely that some counselors will find the practice of CMC counseling as similar in
some respects to the counseling they do when therapy is face-to-face while others will find that
CMC based counseling runs counter to what they find as acceptable practice. To illustrate,
counselors who emphasize a spontaneous or experiential approach that relies heavily on
intuition might find counseling by CMC as being unacceptable given how CMC relies on
delayed correspondence allowing for planning and editing rather than immediate responses. In
contrast, the overall acceptability of CMC for counseling might seem consistent with
counselors who rely on an empirical or data driven approach. With CMC there is the potential
to include data such as quotations from current or previous messages instead of reliance on
recall as with face-to-face interactions. By nature of the medium, CMC counseling also differs
from the traditional face-to-face mode in terms of using writing style and format in place of
nonverbal cues and the variable rate of exchanges rather than a set meeting time (Barak, 1999).
Similarly, counselors who use the restriction of visual cues, such as with the psychoanalytic
approach where the analyst sits out of sight behind the client, may be more accepting of the
absence of visual cues inherent to CMC (e.g., Grohol, 1998). Such theoretical assumptions
about counseling cannot be ignored when evaluating the perceptions therapists have about
working alliance development by CMC.
Counseling Online

Below is a review of case studies and experiments specific to counseling online. In each discussion below, emphasis is given to how the research fits within the tradition of process research. The articles are critiqued throughout and summarized at the end.

The research about online counseling includes descriptive reports, survey, and controlled studies. Discussed first are the descriptive reports that characterize existing services in terms of service type and persons served. Wilson and Lester (1998) researched e-mail counseling used to provide crisis intervention adopted by 20 suicide prevention centers located in the United Kingdom, Australia, and Hong Kong. In their discussion of the services, Wilson and Lester highlighted that although the centers had walk-in and telephone services, men were less likely to use these services than women. In contrast, men were twice as likely to contact the crisis centers using e-mail than women were. Similarly, the authors reported that both clients who had communication disabilities and clients who feared "losing face" reported benefits from e-mail delivered services. Worldwide, during the first three months in 1997 there were 1,157 crisis related e-mail contacts, one-third of which were new contacts. The authors concluded that the format was a viable means for intervention that stands alone or served as a stepping stone to other services (Wilson & Lester, 1998). Even though Wilson and Lester provided evidence of using e-mail effectively for crisis interventions in the field, they only provided a frequency count of e-mail contacts using a case study format, which by design has multiple threats to internal and external validity. Methodologically, the frequency count provided no information about the process that contributed to the success of the e-mail
exchanges they reported. Likewise, it was not clear what was communicated or how the interactions made the e-mail exchanges effective.

In a similar approach, Murphy and Mitchell (1998) wrote an anecdotal piece that described how practitioners used e-mail counseling, with an approach based in a narrative and solution focused theoretical framework. Since it was a case study, Murphy and Mitchell's research also suffers from a lack of empirical rigor that leads to multiple threats to internal and external validity. The authors described the initial contact procedure that they followed (e.g., limits of confidentiality), and provided examples of how emotional connection occurred for them through e-mail based counseling. Murphy and Mitchell (1998) described techniques that they used with e-mail clients (e.g., emotional material in brackets, textual visualization), and reported that literary techniques served the non-verbal functions in their approach (e.g., metaphor, story telling). As was the case for the first-hand experience reported by Wilson and Lester (1998), Murphy and Mitchell reviewed some advantages and disadvantages of the e-mail medium. Murphy and Mitchell also spelled out the different issues faced by counselors working by e-mail, which included real time versus nonsimultaneous interactions and immediate versus delayed response time, as well as the presence of nonverbal cues versus cues in text and clarification by interactivity versus reflective solitary time. The authors underscored that there was no empirical evidence for the effectiveness of their techniques. Murphy and Mitchell, however, provided more information than Wilson and Lester (1998) in terms of process research. Specifically, it was clear that the unit of analysis was individual participant behavior, as opposed to a dyad or group. The particular focus in the research was on individual counselor style and intention, which sheds some light on how e-mail counseling is done and why
counselors write what they do. Similarly, the researchers specified the analysis as being at the microanalysis level since they examined statement-by-statement exchanges.

Colon (1996) described a three-month, asynchronous therapy group comprised of 8 people. The formation of the group was posted online, but the actual e-mail exchanges were private, requiring a password to access. In the group description, Colon (1996) described the procedure of participants signing a consent form as well as the stating the rules of the group. Colon included thoughts about the benefits and potential challenges to conducting a time-limited group using a text-based, online medium. Although Colon described in some detail the actual steps of forming a group, the report was another case study. As such, the results are not based on empirical rigor, making the author's conclusions vulnerable to multiple threats to internal and external validity. Colon, however, offered some unique knowledge to the group formation process when interacting through a bulletin board system. Colon observed the difference in structure, formality, and scheduling between face-to-face and online work. In Colon's opinion, continuity is more easily achieved online, physical barriers can be transcended, and online support offers access to those who would otherwise not pursue counseling. Colon pointed out that repetition, recollection, transference, resistance, conflict, and acting out were all present in the online medium. Despite the empirical shortcomings of Colon's case study, she offered insight into some of the processes involved with group counseling online. Specific to process research, although the write-up was clearly from an individual therapist's perspective, it would have been more informative in understanding the process to know how the group as a system worked since it was a group intervention. It was unclear what or how was communicated as well as why and how effective interventions were.
Colon also reported on the entire group experience from her experience rather than reporting a measure of group cohesion, which is the typical level of analysis in group process research.

In addition to practitioners' reports, there are descriptive studies and surveys cited in the literature. The first by Powell (1998) was a survey of online practitioners. The sample was from a directory of online practitioners, Metanoia, and involved voluntary and anonymous participants. According to participants, the most frequent presenting problem online was relationship issues with depression being second most common, which informs the current study with respect to client's presenting problems. Demographically, online counselors were on average 48 years old with an average of 15 years of face-to-face clinical experience and an average of 2 years working online. The majority of them were psychologists. Collectively, the counselors increased in their average number of clients from an average of 34 clients in 1995 to an average of 103 clients in 1997. This finding underscores the trend in the field; there is an increase in online counseling practice. Powell (1998) informs the current study also with respect to the length of counseling interactions. The average number of contacts per client was three, the most frequent number was six, and the highest number of contacts was nine, 85% of which occurred through e-mail.

The major criticism of the study by Powell (1998) is the low survey return rate of 26%. Likewise, practitioners were solicited from only one directory, making the sample biased, and potentially not representative of all clinicians offering some form of online counseling. For example, there were various specialty area web sites in operation that were not included (e.g., substance abuse, eating disorders). The restricted range of practitioners along with the low response rate brings the external validity of the results into question. Moreover, the instrument
was created by the researcher (Powell, 1998), but no psychometric information was available, putting the accuracy of the findings in question. In addition, the survey was a self report measure, the results of which may be threatened by social desirability. Therefore, the results cannot be generalized given the design limitations. Despite limitations, Powell (1998) provided an estimate of the length of treatment and insight into the types of presenting problems. The findings inform the current research since Powell (1998) found evidence that online, text-based counseling is likely to be brief in nature.

Another survey by Ainesworth (1999) suffers from sampling bias similar to Powell (1998). Ainesworth (1999) collected data about the experience of online counseling from people who visited a web site devoted to Internet counseling (i.e., Metenoia). Despite the potentially unrepresentative sample, the sample included 619 participants, 73% of whom received help from a therapist online. Twenty percent of the participants were considering online counseling, and 7% reported that they would never consider it. Of those who tried online counseling, 68% had never been in therapy before seeking help via online contact. The effect, therefore, of offering online services to the participants is that the majority of online clients who have not used traditional face-to-face methods were able to access counseling services they might not have gotten elsewhere. When asked about how helpful online counseling interaction was, 60% reported that it was very helpful, 32% found it somewhat helpful, while 6% found it not helpful, and 1.5% found it extremely unhelpful. Of those participants who had never seen a counselor before, 64% later consulted with a counselor face-to-face as the result of the Internet exchange (Ainesworth, 1999).
Ainesworth (2000) research shares some of the same research criticisms as that of Powell (1998). Specifically, the researcher developed the instrument, the sample was restricted, and the data were self reported. In addition, the population from which the sample was drawn was undifferentiated, and appeared to represent any one who came upon the survey and was willing to respond, creating a situation of self selection, which makes it unclear as to whom the findings generalize. Even so, the sample was sizeable, and results reflect the clients' perspectives. Though the findings do not include what was communicated or how interactions happened between counselors and clients, Ainesworth (2000) offered information about the effect, or outcome, of what was said or done. Most clients perceived online counseling as helpful when looking back on completed treatment.

In contrast to the practitioners' reports and the available surveys, there were studies that used empirical rigor. First, Barak and Wander-Schwartz (1999) conducted research using college students from several Israeli universities and community colleges who were recruited through newspaper and bulletin board ads offering free group therapy. Participants were able to choose face-to-face or chat room options. An additional control group received no treatment. Potential group members were interviewed by phone to screen out severe problems or non-authentic cases. Researchers inquired about participants' motivation for treatment, past treatment experience, and general mental health parameters during the screening phase of the group. Six participants selected the chat room format (3 female, 3 male), and nine chose the face-to-face format (3 male, 6 female). Group size was predetermined based on the optimal size desired for group therapy intervention. There were seven people in the no treatment group (3 male, 4 female). The control group members were deemed eligible but unable to participate
because of schedule or technical problems. Research questionnaires were distributed both online and through mail two weeks before the groups started and again after the group ended. In addition, the group therapists participated in an interview, however, the authors provided no evaluative information about a questionnaire they developed for the interviews. Both female group therapists used a time-limited dynamically-oriented approach, and had similar experience and skill in brief dynamic therapy. Given the real time nature of the chat room format, there was a predetermined time to convene weekly, much as with the face-to-face group that met on campus. Both groups met seven times for 90 minutes each session (Barak & Wander-Schwartz, 1999).

Participants' responses from Barak and Wander-Schwartz's (1999) study provide evidence of group development through a text-based chat room (i.e., real time) that was similar to face-to-face interaction with respect to group cohesiveness, personal exposure, expression of feelings, independence, and organization. Likewise, both chat room and face-to-face groups had small but statistically significant improvement in self-esteem, well-being, and social relations. The control group remained unchanged (Barak & Wander-Schwartz, 1999). The researchers collected data from participants on therapeutic factors for groups as proposed by Yalom (1995). Both groups were similar in reported perceptions of cohesion, exposure, expression of feelings, independence, and organization. The chat room group reported higher levels of aggression, action orientation, and therapeutic support and control. Both therapists were satisfied, and reported a positive, constructive process similar to other groups they led. Clinically, both felt that the brief approach was too time-limited for change in participants. Interestingly, the chat room therapist noticed interpersonal relationships process developing
faster than she was used to observing in face-to-face exchanges (e.g., like/dislike, aggression, support) (Barak & Wander-Schwartz, 1999).

Barak and Wander-Schwartz (1999) used a design that controlled for many threats to the validity of their findings. The control group design with pretests and posttests controlled factors that might threaten internal validity. In addition, the researchers chose two different therapists to prevent contaminating the data through biasing effects. On the other hand, using two different therapists may have resulted in different treatment for the face-to-face and chat groups. Both therapists reviewed the rules of behavior in the first session. Similarly, the therapist in the chat room condition had reasonable experience with chat rooms (Barak & Wander-Schwartz, 1999).

Even though Barak and Wander-Schwartz (1999) addressed many design issues, the participants completed instruments twice, which creates a possible threat to external validity from the potential interaction of testing with treatment. Also, it was unclear what the exact reliability estimates or what validity evidence there was for the instruments they used since this information was not available in the article. It was not clear as to why the instrument that they developed had more items for the chat room group than the face-to-face condition or what the additional questions addressed. The statistical analyses used to reach their results were not stated explicitly. Furthermore, there were two additional sources of variability for which there was no account. First, the chat room group was anonymous while the face-to-face condition was not. Second, the therapist in the chat room condition had an opportunity to use transcripts to prepare for the next session. It seems that measures of interpersonal dynamics (e.g., personal disclosure, interpersonal sensitivity) as well as therapist preparation were factors in the therapy
that were not controlled, but which could affect the measurement outcomes. Finally, the results must be interpreted within a time-limited approach with small group size.

Even though the results must be viewed with caution, the study by Barak and Wander-Schwartz (1999) offers a glimpse into group relationship dimensions using an online, text-based medium, which is the unit of analysis in the current research. Also relevant to the current research is the finding that people were able to develop group cohesion, which in process research is analogous to the working alliance (Heppner, Kivlighan, & Wampold, 1992). The relationship within the face-to-face and chat room groups was at a level that affected change.

Another field-based study by Schneider (1999) used a between group design. Schneider (1999) reported how 80 participants in individual therapy adapted to technology-based counseling. There were three groups who received therapy by either face-to-face, video teleconference, or audio only communication. For the video and audio only conditions, the researcher used a close circuit TV with video or TV with audio only. All were videotaped, and a wait list group served as a control (Schneider, 1999).

Participants had various backgrounds and problems, and therapists were advanced practicum students (i.e., 2 or more years of clinical work, a least a master’s degree). All were supervised and used a brief cognitive-behavioral approach. Schneider (1999) used multiple scales to measure outcome so as to reflect both global and specific outcomes. Therapists rated their own adherence to treatment, and rated their comfort with the audio, video, and face-to-face conditions.

The analyses conducted by Schneider (1999) were appropriate. He used a MANOVA to test hypotheses related to outcome measures and the comparison of groups. In addition, he used
a multivariate within subject analysis to determine comfort with distance technology over time. He also used a regression analysis to look at levels of comfort with different types of technology (i.e., aptitude by treatment interaction model, interaction effects on outcome across treatment modes) (Schneider, 1999).

There was a significant difference between the video and control groups on the Global Assessment of Functioning (GAF) with the control group having significantly lower scores than the video group. Significant findings were also found between: (a) video and control groups on target complaints, (b) face-to-face and control groups on target complaints, and (c) each of the three treatments and the control group. The findings provide evidence that each treatment was significantly different from the control group on 3 of 4 outcome measures. Further, there were no difference in outcome among the treatment groups. Also, comfort level increased for audio and video treatment over time that approximated the comfort level of face-to-face exchanges. In addition, there was an aptitude by treatment effect observed by Schneider. In other words, when clients had high comfort with the audio mode, there was a resulting higher treatment outcome measured. Therefore, there was support for the hypothesis that people adapt to the communication medium (Schneider, 1999).

Even though the study by Schneider (1999) provided data about counseling with distance communication technology, the findings must be interpreted with design limitations in mind. There was random assignment to treatment with a control group, however, the measures were post-test only. Such a design controls all sources of external invalidity but does not control for mortality, a threat to internal validity. There were differential drop out rates, even though non-significant, with audio and video conditions compared to face-to-face. Eleven
people dropped out of the study (Schneider, 1999), but those remaining were mostly White, making generalization to non-Whites limited.

In addition, the clinicians adjusted their use of the cognitive-behavioral therapy, which raises the question of treatment fidelity. Although therapists self-rated their perceived adherence to treatment, having outside raters would be more compelling, and feasible, since all sessions were videotaped. All clients got treatment in the same building, which controlled the setting as a source of potential variance. Yet, other client variables unaccounted for could determine the suitability for technology-based treatment modalities since not all people adapt universally. Finally, there were only four sessions for each client (Schneider, 1999), which suggested that effectiveness might differ with time.

Even though the study had flaws, Schneider provided information about the outcome of using distance technology for counseling. Specific to the current research, Schneider studied the relationship as a unit of analysis by studying the working alliance, which is an indication of how the counselor and client worked together. The relationships studied were dyadic.

In a related study, Day and Schneider (1999) interviewed clinicians who did face-to-face, video teleconference, or audio only counseling. The clinicians had 26 or 27 clients, and all therapists used each mode of counseling. Clinicians were members of an advanced practicum group with a variety of clinical experiences, and were trained on cognitive-behavioral therapy as part of their curriculum. The clinicians were involved at different levels with 3 to 30 clients, and the clinicians worked at the clinic from 3 to 24 months. As the counselors left the project, they were interviewed. The interviews were taped, and the investigators transcribed the interviews, which were then analyzed for themes. Observers viewed videotapes of the different
conditions. In addition, both clients and counselors completed satisfaction ratings. The ratings were subject to an ANOVA, and there were no significant differences among the conditions for either group (Day & Schneider, 1999).

Day and Schneider (1999) reported that the overarching theme was the ability of both counselor and client to adjust to situations in which no barriers were insurmountable. There were six themes discussed by Day and Schneider that included: (a) emotional connections, (b) working blindfolded, (c) invisibility, (d) approach, (e) client difficulties, and (f) adaptations. Stated briefly, the researchers reported that observers' ratings of the therapy conditions had no difference statistically with regard to working alliance measures, which provided some evidence that the emotional connection did not differ across the different conditions. The clinicians commented on the lack of visual cues, and found that at times there were unexpected benefits and advantages, although there was the potential for communication problems. There were different ideas posed by the clinicians about what counseling theories best apply to the technology exchanges, and some commented on the need to match client characteristics with technology-based counseling. Finally, the clinicians commented on the interaction between familiarity and preference for counseling medium (Day & Schneider, 1999).

Although the study was well conducted and informative, it was exploratory by design. Given the current research on the topic, it was appropriate to do an exploratory study. It raised more questions for further inquiry, however, than answer any specific questions. For example, there were questions posed about matching clients with delivery mode, choosing an approach given technological limits, and training clinicians to work around problems associated with
technology use. Yet, the findings provide some evidence that using teleconferencing or audio only were comparable to face-to-face counseling for brief therapy (Day & Schneider, 1999).

In terms of process research, Day and Schneider added to the knowledge base of how a counselor and client might work together using distance technologies, and they looked at the relationship level from the therapists' perspectives. The researchers raised important questions about adapting therapeutic style to video and audio only mediums, the quality of therapy using distance technologies, and therapists' theoretical intentions.

*Online studies summary.* Overall, the research done specific to online counseling is sparse, and all of the studies reviewed above were field based. Even though real world research is valuable and informative, some of the literature was exploratory by design (e.g., Day & Schneider, 1999). Moreover, some data were gathered without participant consent (Finn & Lavitt, 1994; Miller & Gergen, 1998). Most research articles were equivalent to a case study in terms of empirical rigor (Colon, 1996; Finn & Lavitt, 1994; Miller & Gergen, 1998; Murphy & Mitchell, 1998; Wilson & Lester, 1998). In some research there was a post-treatment only design (Colon, 1996; Weinberg et al., 1995) and no comparison or control group (Colon, 1996; Weinberg et al., 1995), however, other studies had a control group (Barak & Wander-Schwartz, 1999; Schneider, 1999) with random assignment to treatment (Schneider, 1999). Even with experiments, the findings were at times subject to interaction of testing with treatment (Barak & Wander-Schwartz, 1999) or to participant mortality (Schneider, 1999). Likewise, in the experiments there were questions specific to treatment fidelity, group interpersonal factors, or therapist preparation that could affect the outcome measures (Barak & Wander-Schwartz, 1999; Schneider, 1999).
In general, there were a number of studies with no reported reliability estimates or validity evidence for instruments (Ainesworth, 1999; Barak & Wander-Schwartz, 1999; Finn & Lavitt, 1994; Miller & Gergen, 1998; Powell, 1998; Weinberg et al., 1995). In some studies the results were influenced by a small sample size (Powell, 1998; Weinberg et al., 1995), a low return rate (Powell, 1998), or an unclear population (Ainesworth, 1999). In some research the investigators used self-report measures (Ainesworth, 2000; Colon, 1996; Powell, 1998; Weinberg et al., 1995). For the experiments, one clearly defined the statistical procedures used (Schneider, 1999) while another did not state explicitly what statistics were used (Barak & Wander-Schwartz, 1999).

Despite methodological short comings, there appeared to be evidence that brief group therapy in chat room (Barak & Wander-Schwartz, 1999) as well as brief individual treatment through audio and video (Schneider, 1999) were comparable in effectiveness to brief face-to-face counseling. Likewise, there was evidence that both clients and counselors were able to adapt to technologically based modes of counseling (Day & Schneider, 1999; Schneider, 1999). The nature of the interventions, however, was a brief approach, which was too time-limited for marked therapeutic change (Barak & Wander-Schwartz, 1999; Day & Schneider, 1999; Schneider, 1999).

Relative to the current study, the research did not provide evidence about the most frequent form of online counseling, electronic mail (Grohol, 1998; Powell, 1998). There is a need to explore the asynchronous nature of e-mail since the experiments to date were specific to real time communications (Barak & Wander-Schwartz, 1999; Day & Schneider, 1999; Schneider, 1999). Any asynchronous, or nonsimultaneous, exchanges available in current
research were not under any experimental control (e.g., Colon, 1996; Weinberg et al., 1995). Moreover, the research to date provided evidence about the outcome of counseling with technology. Although informative, clinically-based outcome research is characterized by problems that interfere with experimentation (e.g., sufficient participants and therapists, random assignment given client treatment preferences, attrition, ethical issues associated with control groups) (Garfield & Bergin, 1994). Further, the process of counseling is equally as important to understand for online counseling as has been argued for face-to-face counseling (e.g., Kiesler, 1971; Greenberg & Pinsof, 1986; Garfield & Bergin, 1994). Some of the problems associated with clinical settings as well as evaluation of therapy processes might be attainable by shifting the focus to a highly controlled research situation (Garfield & Bergin, 1994).

In summarizing the literature review above, fast advancements in technology made it commonplace to use computer technology for communication (e.g., e-mail, voice mail). Online counseling communication involves Internet-based technology that is mediated by personal computers. Actual technology usage is related to two related constructs, ease of use and usefulness. There is reason to expect that counselors accept or reject CMC use for counseling bearing in mind the ease of use and usefulness of e-mail technology. As such, for the present study it seems important to identify the relationship between clinicians' perceptions about e-mail usefulness/ease of use and their ratings of relationship quality when counseling occurs by electronic mail.

Counseling practice is guided by theoretical assumptions, and in the current study, the discussion of theoretical orientation is relevant because the acceptability of doing counseling by
CMC, and subsequent measurements of a working alliance, might be biased by counselors' theoretical assumptions. As such, it is likely that some counselors will find the practice of CMC counseling as similar in some respects to the counseling they do when counseling is face-to-face while others will find that CMC based counseling runs counter to what they find are acceptable counseling tasks. Such theoretical assumptions about counseling must be accounted for when evaluating the perception therapists have about relationship development by CMC. This being the case, it is appropriate to investigate the relationship between clinicians' assumptions about counseling and their ratings of relationship quality when counseling occurs by electronic mail.

The process of counseling is equally as important to understand for online counseling as has been argued for face-to-face counseling. One way to gauge the counseling process for counseling dyads is through measuring the relationship that develops between a counselor and client. A valid and reliable measure of relational communication was used to indicate the degree of relationship development for dyads and small groups when communication was asynchronous and text-based, although this was demonstrated in the business setting. For online counseling, there were a number of studies with instruments that had no reported reliability estimates or validity evidence. The one exception was a study that used a measure of a working alliance as applied to real time rather than asynchronous exchanges. Because the relational communication instrument has been used for text-based Internet communications, it is acceptable to use it for e-mail based exchanges. Likewise, the relational communication subscale of intimacy is a valid and reliable subscale, and it can provide a more complete measure of relationship quality than the working alliance alone. Conceivably, the concept of a
counseling bond is appropriately broadened by including the RCS-I subscale measure, however, there is a need to determine how the RCS-I and WAI are related.

The working alliance exists for collaboration about counseling work, and it accounts for variance measured in client therapy outcomes. It is not a mechanism for change, but rather a foundation, and it is not linked to theoretical orientation. When measuring the working alliance, observer and client measures of the working alliance were better predictors of the outcomes than measures completed by counselors. There is evidence that a working alliance develops early in a counseling exchange, and it is linked to client change and satisfaction. There are studies about a working alliance developing even when counseling exchanges are mediated by telephone and video technologies, and other research documents that group formation is possible through real time, text-based CMC. There is, however, no research about asynchronous online counseling relationship development.

Besides online counseling, there is evidence from the field of communications that asynchronous CMC exchanges are similar to face-to-face interactions. There was evidence that CMC exchanges do not lead to negative or hostile interactions very often. In contrast, there was evidence that people manage to adapt to a CMC environment to an extent that might be comparable to a face-to-face exchange. It appears that people are capable of developing relationships and forming impressions of each other in a text-based medium, especially when they anticipate continued exchanges. The evidence provided about relational communications, however, is based on data collected from work-focused exchanges. The question in the current study centers on the quality of counseling relationships when the focus of one's work is socioemotional in nature, as is the case with counseling.
As with the business-related research, there was evidence that both clients and counselors are able to adapt to technologically based modes of counseling when interactions were in real time and were comparable in effectiveness to brief face-to-face counseling. Any asynchronous, or non-simultaneous, exchanges (e.g., bulletin board) available in current research were case study in nature, which means they were not under any experimental control. The available research, however, did not provide evidence about the practice of individual online counseling that happens through electronic mail. Therefore, there is reason to believe that text-based, asynchronous communication can be used to establish a relationship that is therapeutic in quality.

Methodologically, online research to date provides evidence about the outcome of counseling with Internet-based technology. As is the case with face-to-face counseling research, however, using clinically-based outcome research when studying online counseling is characterized by problems that interfere with experimentation (e.g., sufficient participants and therapists, attrition, ethical issues associated with control groups). The controlled studies about the working alliance and online counseling were conducted following quasi-experimental designs. Though some control is gained, quasi-experimental designs have multiple threats to internal validity given the lack of experimental control. Some of the problems associated with clinical settings as well as evaluation of therapy processes might be ameliorated by shifting the focus to a highly controlled research situation.
CHAPTER 3

METHOD

The method used in the current study is described below. Specifically, the participants, procedure, and experimental materials are discussed, and then the research questions, hypotheses, and analyses are listed.

Participants

Doctoral level clinicians were recruited to answer the two research questions, which were: (a) do counselors perceive that a relationship having therapeutic qualities develops when client and counselor interactions are text-based and computer mediated; and (b) what is the relationship between relational communication ratings of intimacy, the working alliance, clinician's assumptions about counseling, and clinicians' perceptions about e-mail usefulness/ease of use when counseling occurs by electronic mail?

Specifically, the target population for the study was doctoral level clinicians enrolled in counselor education training programs accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). Doctoral students were targeted for various reasons. First, as described in detail below, the study required observers. When using observers in counseling research it is desirable to recruit persons who are able to judge the salient characteristics of an observed event under study (Heppner et al., 1992). In the current study, participants were asked to judge the characteristics of clinical interviews. Because as a group doctoral students are more experienced clinicians than master's level graduate students (Mayne, Norcross, & Sayette, 2000; Norcross, Sayette, Mayne, Karg, & Turkson, 1998), it was logical to choose doctoral-level students. In addition, it was assumed that doctoral-level
students have an advanced level of training that would allow them to make the level of discriminations required in the study.

Second, a more experienced group of clinicians was expected to increase the likelihood of selecting participants with a theoretical basis for counseling work that was derived not only from classes about theory but that was also grounded in practice. Although an argument could be made for selecting practicing counselors if clinical experience was important, not all counselors have doctoral-level training, and as described below, there was likely to be some resistance toward technology for some counselors in the field (e.g., Rosen & Weil, 1996, 1997). Students from CACREP accredited doctoral programs were selected because technical competencies are a part of the CACREP standards for doctoral studies, and a minimal level of counseling experience post-master's degree is required for admission to CACREP accredited doctoral programs.

A third reason for selecting doctoral students was that in the general population, 86.3% of people with a college education use the Internet. Of the two-thirds of Americans who use the Internet, an estimated 82% use e-mail (Cole et al., 2000). Therefore, it seemed likely that doctoral graduate students had some experience using e-mail, which minimized the chance that the participants had no experience using Internet technology.

Finally, at the time of the study there was a growing awareness that counselors needed technology as a core area of competence, which included for counselor education students the general operation of Internet-based technologies (ACES, 2000). In contrast, there was evidence of hostility and reluctance toward technology by counseling professionals in the field (Rosen & Weil, 1996, 1997). Rosen and Weil found that 10% of the psychologists they surveyed were
eager to adopt technology (e.g., first wave users of technology) in their practices, 54% were hesitant to technology (e.g., a "prove it" attitude), and 36% were resistant to technology (i.e., they avoid/ fearful of technology). It was expected that selecting participants with experience using the Internet minimized attitudes and fears associated with having no experience with such technology. Therefore, the population for this study was adult male and female doctoral-level students who were enrolled in CACREP accredited programs and who had a master's degree or higher. Participants were not selected based on experience given an assumed level of experience commensurate with their level of education. Because the participant group is defined above, it is appropriate to move the discussion to how the population was sampled.

Sampling Procedure for Participants

There are a number of ways to select a sample but, for the current study, graduate schools were a naturally occurring group. A cluster sampling approach seemed appropriate because it is suitable when it is more feasible to select groups of individuals rather than individuals from a defined population (Gall et al., 1996). At the start of the study, it seemed feasible to recruit the 70 participants needed from selected doctoral programs. Specifically, there were 42 doctoral-level CACREP accredited counselor education programs listed in the Directory of Accredited Programs published by CACREP. To introduce some randomization to the sample selection process, the 42 potential schools with doctoral students were put onto a master list and numbered. Then schools were selected by using a table of random numbers. Each doctoral student within the selected schools was invited to participate. As is discussed below, however, the sample used in the current research ended up as a convenience sample due to problems with recruiting an adequate sample size.
Prior to the study, there were efforts made to determine how many schools and subsequent doctoral students were required for the sample, however, there were a number of factors to consider. According to Heppner et al. (1992), once researchers determine the statistical test to use, directionality of hypotheses, level of significance, anticipated effect size, and desired power level, it then becomes possible to determine the sample size. In theory, the sample size reflects a size that maximizes the likelihood of rejecting the null hypothesis at an acceptable level of statistical power, which is defined as the likelihood of rejecting the null hypothesis when it is indeed false (Gall et al., 1996). The different issues as they applied to the current study are discussed below.

In the current research, the statistical hypotheses were all null hypotheses, which carried a higher risk of Type II error (i.e., failure to reject the null hypothesis of no difference when there is in fact a difference) than directional hypotheses (Minium, King, & Bear, 1993). The conventional level of significance ($\alpha = .05$) was used because it was an adequate account of the necessity to reject a false null hypothesis while simultaneously being a sufficient safeguard against Type I error, which refers to the rejection of the null hypothesis when the null hypothesis is true (Gall et al., 1996; Minium et al., 1993). All instruments used in this study met or exceeded the conventional .80 reliability estimate (Heppner et al., 1992). All instruments also met the average reliability estimate of .82, which reflected observer-rated working alliance instruments reported in a meta-analysis on clinically-based working alliance studies (Horvath & Symonds, 1991). Therefore it was unnecessary to increase the size of the sample due to low instrument reliability.
Even though the actual effect of a treatment could not be determined beforehand, it was still important to specify a stipulated effect size to determine the number of participants (Heppner et al., 1992). There are three general approaches that may be used to determine the desired effect size in a study. One way is to review other related research in the area of study to guide the decision, while a second approach is to qualify the size of the effect that has clinical meaning (Heppner et al., 1992). The final approach is to use a classification scheme such as small, medium, and large effect size (e.g., Cohen, 1988, cited in Heppner et al., 1992). Because the area of research in the current study was new, there was no standard of what constituted a reasonable effect size to expect. The clinical significance guideline was likewise elusive given the newness of the CMC medium for counseling. Therefore, according to Heppner et al., the stipulation of a medium effect size (0.3) was warranted in the current research, which is recommended for counseling research areas with no existing guidepost.

Before proceeding, effect size is defined and described with respect to the current study. Statistical significance is meant to indicate whether chance is contributing to research findings, but it is not meant to determine the practical significance of research results (Gall et al., 1996). One approach that is intended to get at practical significance is effect size. By definition, effect size is an estimate of the magnitude of a difference, a relationship, or other effect in a population that is represented by a sample (Gall et al., 1996). Put another way, effect size is how much of a difference the treatments make, or the extent to which groups differ in the population on the dependent variables (Stevens, 1996). In a statistical sense, effect size is used to express the difference between means using the standard deviation as the unit of measurement (Stevens, 1996). The decision about how large the difference has to be between
groups for it to be important, however, is tied to a research question as opposed to statistical procedures (Minium & King, 1993). As with the current study, the effect size statistic can be used to aid in the interpretation of results for a single study.

In the current study, the 0.3 effect size was intended to detect differences between groups that on a practical level reflect a moderate difference between the groups. In other words, it made sense to estimate a medium difference between the groups rather than a large or small one because the estimated effect size was unknown without an established standard for Internet-based counseling. The decision to use a medium effect size was supported by some data available from process research that is specific to working alliance research. Specifically, Horvath and Symond (1991) did a meta-analysis of observer rated working alliance measures, and they found that the combined effect size of the reviewed studies was .26, which is a medium effect size.

Having discussed the effect size, it is now appropriate to discuss power. In counseling research the desired level of power is commonly determined by an accepted standard of .80 (Heppner et al., 1992). In other words, the accepted power level of .80 refers to a probability that 80% of the time the stipulated effect size is detected (Heppner et al., 1992). Since this was an acceptable standard in the field, the .80 level of power was used in the present study.

In summary, the current study used a null hypothesis, a .05 alpha level, a medium expected effect size (0.3), and a desired power level of .80. Using these parameters, two power calculators and one research study were consulted to determine the sample size. First, using the power calculator G*Power (Buchner, Faul, & Erdfelder, 2000) for the a priori calculations, the minimum total sample size was 75 participants. This number, however, was based on
conducting a univariate (ANOVA) test statistic rather than a multivariate statistic. Second, according to the program MINSIZE2 (Morse, 1999), a sample size of 55 was necessary to reach a level of significance. The MINSIZE2 program was suitable for determining effect size and sample size for statistical significance with multivariate statistical tests, and the estimate of 55 participants was based on a MANCOVA statistic. In other words, 55 was the minimal sample size needed for the results of the given analysis to be statistically significant. Finally, Läuter (1978) conducted research on sample size requirements for the Hotelling's $T^2$-test of MANOVA. According to tables calculated by Läuter (1978), the study required a minimum of 72 total participants. Given the different sources for calculating sample size, a conservative estimate of 70 participants was selected.

More than 70 graduate doctoral students were contacted, however, to ensure that an adequate number of people participated. The exact number of counselor education doctoral students enrolled in each school was unknown at the start of the study, although there was evidence that of 54 counselor education programs in 1998 (42 accredited), the programs admitted an average of seven doctoral students each year and graduated six doctoral students annually (Hollis, 1998, cited in Hosie & Glosoff, 2001). Because there were no data about the total number of doctoral students enrolled per counselor education doctoral program, it was assumed that at least one doctoral student was enrolled per year in each doctoral program, or 3 to 4 doctoral students per program. At the start of the study (Fall 2002), 25 of the possible 42 possible programs were contacted to ensure an adequate number of participants. There were not enough doctoral student participants, however, part-way into the study. Therefore, at the beginning of the Spring 2003 semester, attempts were made to contact faculty to ask that they
remind doctoral students about the study. Likewise, the remaining CACREP accredited schools were contacted. By the time of the second phase of recruitment, however, other counselor education programs were accredited. Of the 45 programs contacted, there were a total of 30 schools who participated, and 15 schools that declined to participate or had discontinued their doctoral program. The e-mail recruitment method made it difficult to compute the response rate because it was not possible to determine how many doctoral students received notification of the study (e.g., students who did not get or read the e-mail). Therefore it was not possible to calculate a response rate for the convenience sample used in the study. Likewise, it is not clear what differences exist between the doctoral students who participated and those who did not. How the participants were recruited is described below.

Procedure

In the current study, the dependent variables (i.e., working alliance, intimate relational communications) required treatment participants first to read an e-mail exchange and then to rate the development of the relationship (e.g., the client and counselor feel uncomfortable with each other, client and counselor showed no desire for further interaction with each other). Two dependent variables, measures of working alliance and intimate relational communications, were selected because using more than one variable better operationalized the construct (Heppner et al., 1992), which in the current study was relationship quality.

To make a comparison between treatment and alternate treatment participants, participants in both treatment and alternate treatment groups completed the dependent measures. Because the instruments could not be completed without reference to a relationship, however, both the alternate treatment group and treatment group read e-mail exchanges
between a client and counselor. The absence of a working alliance and intimacy in the text used differentiated the alternate treatment group exchanges from treatment exchanges. For instance, the treatment scenario included communications that indicated collaboration on establishing counseling tasks and receptivity by the counselor to what the client wrote. In contrast, the alternate scenario indicated a lack of collaboration and no receptivity by the consultant to the client's statements.

Participants were randomly assigned to one of the two conditions posted online, which included one treatment and one alternate treatment condition respectively. The alternate treatment condition is discussed first. According to Gall et al. (1996), the definition of a control group is:

... a group of participants who receive either no treatment or an alternate treatment to that given the experimental group to assess the effects of extraneous factors on participants' posttest performance. . . . the goal is to keep the experiences of the experimental and control group as identical as possible, except that the experimental group is exposed to treatment. (p. 494)

In the current research, there was an alternate treatment group because participants could not have completed the dependent measures without a communication exchange to reference. Therefore, the alternate treatment condition required participants to read e-mail interactions between a counselor and a client that included a series of e-mail session exchanges. In a similar way, the treatment interaction group required participants to read a series of exchanges between a counselor and client. Regardless of group assignment, all participants were asked to rate the interactions they read on the strength of the working alliance and the
quality of intimate relational communications, the dependent variables. Participants also completed measures of their attitudes toward e-mail use and usefulness along with assumptions they had about counseling practices.

A post-test with control group design was appropriate to answer the research questions because it allowed for experimental control of text-based counseling relationship communication. The treatment group of participants read a text-based CMC scenario that included communication having therapeutic qualities, and then rated the dependent variables of a working alliance and intimacy with respect to their perception of the text-based exchange. By having an alternate scenario that did not include a therapeutic relationship, it was possible to demonstrate that under another condition participants did not perceive that a working alliance and intimacy were communicated through text. Put another way, the participants' responses were expected to convey that under one condition the text-based medium communicated a working alliance and intimacy while a different set of text-based exchanges did not communicate a working alliance and intimacy. This distinction between the two conditions provided data to answer the research question about counselors' perceptions of whether they observe that a therapeutic quality was communicated by CMC. The analysis also provided a way to remove other sources of variance from related variables (i.e., counselor theoretical position, perceived e-mail usefulness and ease of use) from effecting the dependent measures, strengthening causal inferences (Gall et al., 1996).

Gall et al. (1996) pointed out that it is important to have a representative design that has an environment that accurately reflects real-life environments and natural characteristics of participants. Because the topic under study involved text-based, online counseling, all the
instruments and scenario materials were delivered on the Internet. It was thought that having the scenarios online created naturally varying environments where participants completed the study. Likewise, participants were in a familiar setting that they use for Internet access, and they were allowed to engage in their typical range of behaviors during Internet access.

Because the materials were posted online, there were some technical considerations to resolve. In particular, there was the issue of between group experimental group assignment. In previous research, data were collected from the World Wide Web using a between group design by using a common gateway interface (CGI) script (Morrow & McKee, 1998). Briefly, a server-side CGI script is a program that runs remote from the user that performs actions after interacting with the user's computer. The scripts act as a moderator between the participant's computer and the experimenter. Such scripts can be run on the server and directed to implement the selection process. For instance, Morrow and McKee (1998) described in detail how they used a CGI server-side script to perform the action of group assignment. The CGI script used for the present study was based on Morrow and McKee's work (1998) because there was permission to use the existing script by A. McKee (personal communication, March 7, 2001). The script, however, was modified for the current study (i.e., participants were routed to an actual research condition). In addition to automating group assignment, a further benefit of using a web posted instrument is that when compared to paper and pencil surveys, the web-based data have fewer missing values (Stanton, 1998). Similarly, the data collection procedure occurs automatically by having responses entered into an existing database or saved as a file that can later be retrieved. In the current study an existing form handler CGI script was modified to handle the electronic forms that participants submitted (i.e., BNBFORM All-In-
One Form Processing Script). The script saved each set of responses to a secure server space
dedicated to the current study.

As with any data collection method, however, there is a downside to using web-based
survey instruments. Kaye and Johnson (1999) warn of methodological issues that can arise
when conducting research using the World Wide Web. For instance, it might be difficult to
obtain a representative sample of a given population when not every person can access the web.
Also, there is not always a clear way to calculate response rate when a survey is posted solely
on the web since some individuals might see a link but choose not to participate. These
warnings were salient to the current study response rate.

There were other concerns raised by Kaye and Johnson (1999) that were relevant to the
current study. Drop-down boxes can save space, but using them can increase the amount of
time to complete an instrument when compared to a paper version. As such, all of the
instruments used in this study, which were Likert-type, used radio buttons that required one
click rather than the menu selection required of drop down boxes. Another technical issue that
can arise is the display capabilities of different web browsers. Formatting can be affected if, for
example, one line of text is a single line in one browser but is word wrapped into two lines on a
different browser. In the present research, it did not matter if the text wrapped for the scenarios.
To minimize word wrapping within the study instruments, the Hypertext Markup Language
(HTML) was programmed to display the Likert scales as tables in participants' browsers.

Similarly, font size, font style, and image alignment or placement might vary from one
browser to another. Kaye and Johnson (1999) recommend using a neutral background and
keeping lines of text and questions as short as possible. They suggest designing the survey such
that if any wrapping happens, the formatting would be minimally disturbed. To get around the problems of layout and fonts, all materials were put into HTML, the most basic language that all web browsers read rather than more advanced approaches used to display web pages (e.g., cascading style sheets). The font was a common one (i.e., Times) that most computers can display. As a precaution, all documents were opened using different browsers prior to implementing the study to check the formatting, (e.g., Internet Explorer, Netscape Navigator, Opera), for both PC and Mac operating systems. A related consideration was the downloading speed, which is reduced by avoiding images or background colors. The present research used no background color, and there were no images.

For data collection, there was the possibility that a participant might submit more than one survey. One way to circumvent this problem was to use a server-based cookie that relied on a CGI program, which was described above. Put simply, a cookie can allow or deny access to a web site much like a movie theater ticket allows you to return to a movie (Pierce, 2000). In the current study, the cookie had the effect of not allowing an individual to return to a web page, as would be the case if an individual lost a ticket and wanted to be return to a movie. Because some web-users set their preferences to reject all cookies, in the consent form there was mention of the necessity to send a cookie upon submission of the questionnaires. To minimize biasing the sample, the cookie was sent after the data were already submitted. Another technical problem, which cannot be prepared for, is a problem with electronic transmission that can happen when participants return the surveys. Attempts were made to ensure proper functioning of the web site by testing that each web page worked before starting the study. There were no questions about the operation of the web-based materials during the course of
the study. Other recommendations Kaye and Johnson (1999) suggest include: (a) instructions should be clearly stated, (b) pretests should be conducted to measure length of time and ease of completion, and (c) a check of the survey using different browsers to uncover browser-based design flaws should be conducted. All of these suggestions were followed prior to the actual study. Practice trials with the materials revealed that there were no operational problems or web design flaws, that the site instructions were clear, and that the completion time was as estimated. Finally, as mentioned by Morrow and McKee (1998), using a server side CGI script has the potential to compromise the study if the script is accessible to anyone who could modify it. As such, the script was on a secure server (i.e., https://) that required a password for access to its files and site "permissions" to modify documents.

All participants completed all of the instruments reflecting the constructs under study, yet despite the ease that comes with using observers, having observers as raters can introduce systematic bias (Heppner et al., 1992). To minimize bias Heppner et al. (1992) recommend separating variance due to the observed event from variance due to the perceptions of the raters themselves, which in the current study are variables hypothesized to influence participants' acceptance of e-mail in general and e-mail for counseling in particular. As such, there were data collected on hypothesized covariates. Another way to minimize any systematic bias is to have raters be unaware of as many experimental factors as possible (Heppner, et al., 1992). Therefore, participants were not informed of the hypotheses or conditions of group assignment. A final source of systematic bias can come from having all participants complete the instruments in the same sequence of administration (Gall et al., 1996). To prevent this bias the order of the instruments were counterbalanced in their administration.
As described above, participants were randomly assigned to treatment and alternate treatment groups. Participants were asked to provide some demographic and counseling experience information to address the possibility that random assignment may not be successful at eliminating initial differences between treatment and alternate treatment groups. Having participants do this first can also facilitate a mental transition to engaging in an experimental task (Gall et al., 1996). Then, the participants were asked to complete the covariate instruments, which were presented in a counter balanced order. According to Stevens (1994), covariates should only be collected before exposure to any treatment to avoid any undue influence of the treatment on covariate measurement. Finally, participants were asked to read either the treatment or alternate treatment e-mail exchanges. Participants then completed the remaining two instruments in counterbalanced order. Again, counterbalancing was important since with a posttest only design, findings could represent group differences or systematic biases rather than treatment effects (Gall et al., 1996).

Another source of variance comes from using a biased sample in which volunteers differ from non-volunteers. It is also important to consider the characteristics of volunteers, potential differences between volunteers and non-volunteers, and sources of data about the target population (Gall et al., 1996). There are several characteristics of research volunteers, which when compared with non-volunteers include having a higher education level, social-class status, intelligence level, and sociability level (Rosenthal & Rosnow, 1975, cited in Gall et al., 1996). Volunteers are also more likely to need social approval, be arousal seeking, be unconventional and nonconforming, be female, and be less authoritarian (Gall et al., 1996). Of these characteristics, the relevant ones that could bias the sample for the current study were sex,
conventionality, and conformity. The differences could have influenced results of the current research because using e-mail for counseling was not the conventional treatment mode to which most counselors adhere. In the current research, faculty from two schools declined to participate based on this factor. It seemed reasonable to anticipate such resistance, so an appeal to doctoral students was made in the recruitment letter (i.e., mention of ethical concerns over CMC) since potential participants might have chosen not to consider any unconventional forms of counseling and reject an invitation to participate.

There are a number of suggestions that Gall et al. (1996) make specific to improving volunteer rates, and there is research about recruiting volunteers that can be useful. Likewise, there is an emerging area of research devoted to participant recruitment when instruments are completed online. Gall et al.'s suggestions along with how they were addressed in the present research are discussed below.

Traditionally, recruitment letters are used to solicit participants. When composing a recruitment letter, Gall et al. (1996) recommend making an appeal that is as interesting as possible to those being recruited. Likewise, making explicit the theoretical and practical importance of the study can increase participation. Since the research at hand is of ethical importance (e.g., protect clients from harm, effectiveness of CMC), the implications for ethical practice were highlighted. Another way to attract participants is to make explicit how the sample being recruited is particularly relevant to the study (Gall et al., 1996). As such, there was emphasis placed on doctoral students as advanced professionals who have skills to discern clinical information and on the fact that because many will assume supervisory or teaching roles, some exposure to and experience in this realm may be advantageous. There was also an
emphasis that by volunteering, individuals had the potential to benefit others since research about e-mail counseling has implications for direct benefit to clients using such services.

By convention, survey research is distributed by postal mail, however, there is evidence that electronic mail is a viable alternative. According to Sheenan and McMillan (1999), both salience and prenotification are techniques that have a positive effect on increasing survey response rates through e-mail recruitment. Reminder messages sent for three studies generated from 23 to 48% of the total responses when recruitment letters were sent by electronic mail. Further, with e-mail the reminder mailing can occur within one week of the original recruitment letter rather than over a course of weeks during which the participant might forget about the study (Sheenan & McMillan, 1999). Further, there is evidence that online surveys that are embedded in an e-mail message yield a higher return rate than those that are attached (Dommeyer & Moriarty, 2000). Although the actual surveys for this study were not embedded in the actual recruitment e-mail message, the web link to the study was included in the e-mail to facilitate participation.

In the current study, faculty members in the selected counselor education programs received an e-mail, which included a request of them to distribute an e-mail recruitment letter to doctoral students enrolled in their program (see Appendix A). The e-mail included enough information to introduce the topic and ask for assistance in distributing the e-mail recruitment letter. The specific involvement included sending an e-mail recruitment letter to doctoral students in their program as well as a follow-up reminder by e-mail. To ensure that faculty passed along the e-mail, they were asked to reply to my initial e-mail to signal that they sent the recruitment letter to doctoral students. Having the faculty member forward a recruitment e-mail
and follow-up was intended to reduce the rate of doctoral students not reading the message or viewing the message as junk mail or spam (Shennan & McMillon, 1999). Another benefit to faculty involvement was that the request for participating came from a person of status and prestige, which can further the likelihood of participation (Gall et al., 1996).

There is evidence that although recruitment letters facilitate response rate, there are also other techniques that can be used to increase response rate. Fox, Crask, and Kim (1988) conducted a meta-analysis on data from 82 studies that focused on survey response rates. Postal mail survey response rates were influenced by university sponsorship, prenotification, follow-up reminders, and questionnaire color. On average, university sponsorship and prenotification increased response rates by 8.9% and 7.7% respectively. Small but significant effects were associated with using green as opposed to white questionnaires (Fox, Crask, & Kim, 1988).

Therefore, the current research made the university affiliation clear in recruitment and treatment materials. As described above, however, the color was white to decrease web page downloading time. In addition, the anonymity of Internet-based materials was explained during recruitment since response rate to online surveys is assumed to increase similarly to how postal mail surveys increase with anonymity of participation (Cho & LaRose, 1999).

Participation can also be increased by having the request for volunteering made by a person of high status and by having someone known to the population make the appeal for volunteers (Gall et al., 1996). This was addressed by enlisting the support of faculty in the graduate programs. Since it is also advisable to avoid research tasks that can be psychologically or biologically stressful, participants were informed about the amount of time participating would take as well as the simple nature of their task of reading a clinical exchange. The rate of
participation can also increase when researchers communicate that volunteering is the customary thing to do, so an appeal was made to potential participants that peer doctoral students typically support one another in their research.

Because the current study used no pretest, it was important to know if there were differences between the treatment and alternate treatment groups that might have existed prior to treatment. As such, there was some basic information collected about the groups (e.g., years of clinical experience, sex, age, race, private/public school, region of the country). Participants returned basic information when they submitted all of the forms related to reading the scenario. In other words, no matter which group a participant was assigned to through the CGI script, the first thing she or he saw was the demographic information. The scenarios and other instruments were available by scrolling down the web page.

The process that participants went through was intended to ensure a representative experimental design. Gall et al. (1996) recommend, when appropriate, conducting the research in the actual environment to which you wish to generalize. In the current study, the environment to which the results applied was the Internet, as accessed by a personal computer. Although it would have been optimal to have the materials presented to participants by e-mail, the security of electronic mail was more difficult to ensure than a web-based system for transmission and for anonymity. Since participants took the instruments in different environments, it was easy to incorporate several environmental variations into the design, which is desirable (Gall et al., 1996). The extent of the environmental differences can be assessed easily by asking participants specific questions about the conditions under which they took instruments (e.g., how many people were around when participating, what distractions
they had). In a similar way, participants were asked to try to complete the study when no others were around to get a consistent social context that could influence treatment results. Gall et al. also recommend preparing participants through brief instructions to facilitate a transition from current mental set to one required of the experimental task. Hence, the first text that participants read was a brief paragraph describing that they would read an exchange after which time they were to respond to the scenario.

*Instruments*

It is essential to select measures that are adequate operationalizations of intended constructs, therefore included below are the psychometrics supporting the instruments used in the study in terms of reliability estimates and validity evidence. For all instruments, the reliability coefficients were demonstrated to be in excess of .80, which is the minimum level of reliability generally viewed as acceptable (Heppner et al., 1992). The reliability estimate for each instrument was computed using the data collected in the current study to ensure that the different instruments maintain their desired psychometric properties. The Cronbach coefficient alpha internal consistency estimate was the appropriate reliability coefficient calculation for the present study because: (a) all of the instruments had multiple response categories (i.e., 7-point response scale) and (b) the instruments were administered only one time.

There were four different instruments used to measure the dependent and concomitant variables. The dependent variables, the working alliance and intimate relational communications, centered on relationship quality. Specifically, the working alliance was measured by the Working Alliance Inventory (Horvath & Greenberg, 1989) and intimacy relational communication by the Relational Communication Scale-intimacy subscale (Burgoon
& Hale, 1987). The covariates were clinical theoretical orientation, which was measured by the Counselor Theoretical Position Scale (Poznanski & McLennan, 1999), and perceived usefulness and ease of use of electronic mail, which was measured by the Perceived Usefulness and Ease of Use Scale (Davis, 1989).

Demographics form. As stated above, the data gathered by the demographics form was intended to address the possibility that random assignment was not successful at eliminating initial differences between experimental and alternate treatment groups. Relevant demographics included participant age, sex, race, clinical experience, regional information, and years of e-mail and WWW use (see Appendix B).

The Working Alliance Inventory (WAI). The Working Alliance Inventory yields both one general working alliance score and three subscale scores for the process variables of task, goal, and bond (Horvath & Greenberg, 1986, 1989). The WAI (see Appendix C) is a 36-item instrument that uses a 7-point Likert-type scale (1 = Not at all true; 2 = A little true; 3 = Slightly true; 4 = Somewhat true; 5 = Moderately true; 6 = Considerably true; 7 = Very true) to rate the degree of agreement with statements about counseling interactions. The individual item responses are summed for a total score that ranges from 36 to 252, with a higher score indicating a greater working alliance. The instrument includes statements such as "client and counselor feel uncomfortable with each other" and "the counselor perceives accurately what the client’s goals are." The instrument has three formats that use the perspective of the client (WAI-C), therapist (WAI-T), or observer (WAI-O). There is ample evidence that when comparing the three different perspectives, the observer or client working alliance perspectives are better outcome predictors than working alliance ratings completed by therapists (Sexton &
Whiston, 1994). In the current study, the observer form of the WAI was used. When compared with other working alliance measures, the WAI observer form was considered economical because it required no rater training (Tichenor & Hill, 1989).

The reliability evidence for the WAI includes internal consistency estimates using Cronbach's alpha, which were .93 for overall client scores with subscale alphas of .85 to .88. The overall alpha coefficient for therapist score was .87 with subscale alphas of .68 to .87 (Horvath & Greenberg, 1986). The internal consistency of the observer form has an estimated coefficient alpha of .98, but the subscale alphas were not reported for the observer form (Tichenor & Hill, 1989). Therefore, the instrument has ample evidence of reliability.

There is likewise evidence of validity. A confirmatory factor analysis provided evidence of scale validity for subscales and global score (Tracey & Kokotovic, 1989). The WAI scales (observer form, client form, counselor form) intercorrelate highly (Horvath & Symonds, 1991; Tichenor & Hill, 1989). There is also evidence that the WAI observer form intercorrelates with other working alliance measures (The California Psychotherapy Alliance Scales, The Vanderbilt Therapeutic Alliance Scale) providing further evidence of construct validity (Tichenor & Hill, 1989). In addition, there is documentation of the WAI’s concurrent validity (Tracey & Kokotovic, 1989) and convergent and discriminant validity. Content validity was supported through expert raters, and convergent-divergent validity by multitrait-multimethod analyses (Horvath & Greenberg, 1986).

It is argued that more than one instrument is recommended to define constructs and subsequent dependent variables of interest (Heppner et al., 1992), which in the current study involved the quality of relationship development online. Several measures may more
adequately represent one construct given conceptual overlap between what different instruments operationalize. In the current study the working alliance was focused on therapeutic foundations. The Relational Communication Scale, which has been used to describe relationship quality within a text-based CMC medium (Walther & Burgoon, 1992), was also used to address the construct of relationship quality.

Relational Communication Scale-Intimacy Subscale (RCS-I). The Relational Communication Scale (RSC) measures message themes perceived in people's relational communications including verbal and nonverbal message exchanges that define the nature of an interpersonal relationship (Burgoon & Hale, 1987). The RCS includes items that measure 12 distinct themes. The scale was developed, then subject to three measurement studies using exploratory oblique and orthogonal factor analyses and confirmatory factor analyses. Seven experiments in which the measure was used provide reliability estimates as well as predictive validity data (Burgoon & Hale, 1987). Following a series of confirmatory factor analyses, a scale comprised of 26 items was reported as an efficient but global measure of all dimensions of relational communications (Burgoon & Hale, 1987). Burgoon and Hale suggested that if a certain facet of relational communication is pertinent, the items from the 68-item version should be added to increase reliabilities (i.e., restoring items to the scale), but recommended that the shortest version for measuring all 12 themes include no fewer than 30 items. According to Burgoon and Hale (1999), it is also possible to use only a composite of related subscales instead of the entire instrument (e.g., involvement/affection, affection/depth) or an individual subscale such as intimacy. When an abbreviated version is created, it should include at least 5
items per theme or composite to be measured, with items from the various themes interspersed with one another and randomly ordered (Burgoon & Hale, 1987).

The RSC-I (see Appendix D), a subscale of the RCS, can be used to measure dimensions underlying interpersonal relationship definitions and states. The RCS-I can either be used by participants or by observers who make judgments about interpersonal relationships. It is designed primarily for dyadic relationships. The instrument has been designed for use following several communications, a single episode, or a small segment of an episode. The scale includes items that are rated on a 7-point Likert type scale (1 = Strongly disagree; 2 = Disagree; 3 = Disagree somewhat; 4 = Neutral or unsure; 5 = Agree somewhat; 6 = Agree; and 7 = Strongly agree) (Burgoon & Hale, 1987).

For the purpose of the current study, not all of the possible 68 items that reflect all of the themes and corresponding subscales were used because the relational communication of intimacy was the only theme of interest. Instead, a 34-item version that included each dimension of intimacy (involvement, affection, receptivity/trust, depth, and similarity/inclusion) was used, and each subtest had 6-8 items. RCS-I scores can range from 34 to 238 with higher scores indicating a higher degree of receptivity, trust, affection, involvement, and depth. Example items from the RSC-I include "the client and counselor were not fully engaged in the conversation," "the client and counselor were open to each other's ideas," and "the client and counselor tried to move the conversation to a deeper level" (Burgoon & Hale, 1987).

The reliability estimates for composite scales and abbreviated versions of the RSC have not always reached the minimal estimate of .80 (Gall et al., 1992). For example, a 26-item
abbreviated version used by Buller (1984, as cited in Burgoon & Hale, 1987) yielded an internal consistency estimate of $r = .77$ for similarity/depth composite and $r = .86$ for intimacy/similarity composite (Burgoon, Manusov, & Hale, 1985). A more robust reliability estimate, however, is available by using all intimacy items for a global measure of intimacy. Burgoon and Hale (1999) reported the estimates from separate studies that yielded the coefficient alpha reliabilities for global intimacy as .81 (Burgoon & Hale, 1987), .86 (Burgoon, Buller, Hale, & de Turck, 1984), and .99 (Burgoon & Hale, 1999). As such, the current research used the more robust scale that has all 34 items from the intimacy subscale to measure intimacy dimensions.

*Perceived Usefulness and Ease of Use Scale.* The measurement scale of Perceived Usefulness and Ease of Use, developed by Davis (1989; see Appendix E), is intended to measure what causes people to accept or reject information technology. The perceived usefulness subscale measures the extent to which people believe a certain technology helped them perform a task. The ease of use subscale measures the degree to which a user believes that a system was free of effort. Each subscale has six items, making the entire instrument 12 items long. Agreement with statements are reported using a 7 point Likert type scale (1 = Extremely likely; 2 = Quite likely; 3 = Slightly likely; 4 = Neither likely nor unlikely; 5 = Slightly unlikely; 6 = Quite unlikely; 7 = Extremely unlikely). Each subscale is totaled to yield scores that range from 6 to 42 with lower scores indicating greater perceived usefulness and greater ease of use. Example items include statements such as "I find e-mail useful in my job" and "I find it easy to get e-mail to do what I want it to do" (Davis, 1989).
In initial instrument development, the perceived usefulness subscale attained an alpha reliability of .97 across two separate systems (e-mail, file editor program). For the perceived ease of use subscale, the reliability coefficient for e-mail was .86 and for the file editor was .93 (Davis, 1989). When pooled, the alpha for ease of use was .97, and .91 for usefulness. In a replication study, Adams et al. (1992) looked at usefulness and ease of use scales for e-mail (alpha .94 and .88) and voice mail (alpha .97 and .86), as well as word processing (combined alpha coefficient .96), spreadsheet (combined alpha coefficient .93), and graphic production software (combined alpha coefficient .98).

According to Davis (1989), there is evidence of discriminant validity, established by multitrait-multimethod analysis, as well as convergent validity, established through a monotrait-heteromethod correlation. In addition, there is evidence of construct validity gained through a factor analysis, established by using a principle components analysis with oblique rotation (Davis, 1989). The items loaded as distinct factors supporting the idea of two factors as hypothesized (Davis, 1989). In a replication study, there also was evidence of construct validity with varimax rotation resulting in two factors (Adams et al., 1992). Likewise, the convergent and discriminant validity identified by Davis (1989) was found in a replication study that used different technologies than Davis' (1989) original instrument development study (Adams et al., 1992).

Counselor Theoretical Position Scale (CTPS). The Counselor Theoretical Position Scale is intended to measure the dimensions of beliefs about therapeutic practice that influence counselor training, supervision, and practice (Poznanski & McLennan, 1999), which are covariates in the current study. These dimensions represent conceptual accounts of counseling
processes and psychological problems as well as distinctive kinds of therapeutic intervention techniques. The CTPS is comprised of two 20-item subscales, the Rational-Intuitive and Objective-Subjective (see Appendix F). The items are rated using a 7-point Likert type scale (1 = Completely disagree; 2 = Moderately disagree; 3 = Somewhat disagree; 4 = Equally agree and disagree; 5 = Somewhat agree; 6 = Moderately agree; 7 = Completely agree). Scores from items for each subscale are totaled, and scores for both subscales can range from 20 to 140. High subscale scores indicate a preference for rational and for objective beliefs. The scale includes items such as "The emotional process in counseling or psychotherapy is a vital agent of change," "Understanding of a client's childhood is crucial to therapeutic change," "Emotional stability is a product of one's logical and consistent thinking behavior," and "Improving the client's level of social adjustment ought to be the main therapeutic aim." Some items are reversed scored, and scores for the subscales range from 20 to 140. A high subscale score represents a stronger preference for rational and for objective beliefs. Internal consistency coefficients for the items on the Objective-Subjective and Rational-Intuitive subscales were .87 and .81, which are acceptable levels of reliability (Poznanski & McLennan, 1999).

There is evidence for construct validity based on Poznanski and McLennan's factor analysis, which indicated that the hypothesized two-factor solution was appropriate. Likewise, the instrument authors reported criterion validity by determining whether the pattern of the means in relation to the two theoretical orientation dimensions were consistent with what they theorized. As expected, self-ascribed cognitive-behavioral counselors had the highest mean scores on both the Rational-Intuitive and Objective-Subjective subscales while psychodynamic counselors had the lowest mean score on the Rational-Intuitive subscale. Again as theorized,
self-ascribed experiential counselors had the lowest mean score on the Objective-Subjective subscale while self-ascribed family/systemic counselors had intermediate mean scores on both subscales. The correlation of CTPS subscales and self-ascribed theoretical orientation was calculated, and the point-biserial correlations were consistent with predictions (Poznanski & McLennan, 1999).

_Treatment and alternate treatment scenarios._ When conducting an experiment, it is important to determine whether the experimental conditions vary on only the intended dimensions. According to Heppner et al. (1992), one way to determine this is to conduct a manipulation check that includes independent raters, either expert or novice, to review experimental materials on the intended dimensions. Specific to the interactions in the current study, it was important to determine if the scenario sequences contained the sought after relationship conditions but not other unintended dimensions. Because the constructs under study required some advanced level of education and training, it made sense to use expert judges. Also, the judges selected needed to have some experience using the electronic mail format for counseling to ensure that the materials represented the constructs in terms of nature and intensity, which is important to analogue-clinical generality (Borkovec & Rachman, 1979).

In discussing the scenario materials, there are two phases of material development to describe. First, there was a validation of the treatment scenario, and second there was the manipulation check phase. The validation of the treatment scenario required various steps, which began with an existing and available model of an e-mail counseling exchange developed by Murphy and Mitchell (1998), who are online counselors and founders of West Coast Therapy Online. The available example included a male with marital problems, and at the time
of material development was available for public review on the World Wide Web at http://www.TherapyOnline.ca/default.html. The length and type of presenting issue used for the scenario in the current study was based on Murphy and Mitchell's example, but the actual content and writing style differed from the model to ensure that no copyright law was infringed upon. The presenting issue of a relationship problem was used since according to Powell (1998) relationship problems were the most frequently reported issues in his survey of online counselors. The client was made female for the treatment scenario since women were more likely to use online counseling services (Powell, 1998). The details of the client's issues in the treatment scenario were an amalgamation of actual clients who received counseling from two counselors for drug and alcohol related issues who were colleagues of the researcher. The specific client issues were taken from real client concerns to add to the validity of the presenting issues.

To establish that the treatment scenario represented the constructs of a working alliance and intimacy, six experts in the area of Internet counseling were involved with the treatment scenario validation. The experts were selected based on being published in the field specific to Internet counseling and for leadership roles they have in the International Society for Mental Health Online (ISMHO). Four were doctoral level counselors or psychologists, and two were master's level licensed social workers, however, all had experiences providing online counseling.

The six experts were recruited by e-mail. The experts received a copy of the scenarios, which were in a word processing format that was attached to an e-mail message. Experts were instructed to read the treatment scenario, and answer a series of questions. Specifically, the
experts were asked: (a) do you agree that the interaction sequence above demonstrates evidence of a working alliance (e. g., agreed upon goals, agreed upon tasks, and emotional bond), (b) do you agree that the interaction demonstrates evidence of intimacy (i.e., both are involved, evidence of affection, evidence of trust, open to one another, moved to deeper level), and (c) what would you suggest that might make the scenario more like on-line counseling (e. g., the type of problems encountered, type of client, the length of an on-line counseling case). The experts were encouraged to answer the questions that were inserted at two places in each scenario, in the middle and at the end of the exchanges. They were, however, also encouraged to comment about how the exchanges could be made more realistic by making comments directly in the text using all capital letters to make their suggestions stand out.

The first two experts had suggestions that were incorporated into the treatment and alternate scenarios before presenting them to the remaining experts. Therefore, the latter experts made recommendations on revised versions. They only made suggestions about the length of the individual exchanges in the treatment scenario, but agreed that the entire scenario length was appropriate and that the content of the treatment scenario had evidence of a working alliance and some level of intimacy. The experts also agreed that there was a difference in relationship quality in the treatment scenario and the initial alternate treatment scenario specific to presence of a working alliance and intimacy (see Appendix G).

As stated above, the experts made recommendations directly in the text of the treatment scenario, and all of their suggestions were incorporated into the treatment scenario. The revisions of all reviewers are listed collectively and included: (a) requiring more exchanges to allow relationship development, (b) using e-mail replies that quoted what the client wrote in an
earlier exchange, (c) using icons (e.g., 😊) and brackets to convey counselor emotion or reaction, (d) including an interpersonal conflict within the counseling interaction, (e) making the alternate treatment interaction interventions similar to what might be said by a friend or quoted from a popular magazine, (f) making limits of confidentiality explicit in the treatment scenario, (g) practicing within the scope of practice for online work with appropriate referrals to face-to-face services, and (h) using an articulated counseling theory and method for writing that is therapeutic rather than using counseling methods based on face-to-face counseling.

Before describing the second phase of materials development, it seems important to say more about the theoretical grounding used for the treatment interaction scenario. Specifically, the scenario followed an interactive journal format (Childress, 1999; Progoff, 1975). The main assumption of the interactive journal method is that since the text-based medium of books can deliver helpful therapeutic interventions, then the interactive written word of text-based Internet communications could deliver therapeutic interventions previously delivered in a non-interactive written format such as books. Because the written medium of e-mail is much like journal writing, Childress argues that therapeutic interventions associated with journal writing can be implemented through the text-based exchanges of e-mail. An e-mail journal might be used as an intervention delivered solely through a text-based Internet medium. From this framework, an on-line counselor might provide feedback and structuring of activities that aid clients in assimilating fragmentary experiences into a meaningful view. The e-mail journal is theorized to address the working through of past experiences (Childress, 1999).

Since the treatment interaction scenario follows the e-mail journal format, it seems important to discuss the underlying theory used for journal writing. One of the major traditions
in counseling journal writing is the Intensive Journal method (Progoff, 1975, 1992). Put simply, the Intensive Journal is a non-linear journal technique that uses a method of entries made in different topic areas that are then expanded upon through structured exercises. The four topic areas, according to Progoff (1975), are life/time dimension, depth dimension, dialogue dimension, and meaning dimension. Each dimension is described briefly below, followed by the reason for selecting the Intensive Journal method for the treatment interaction scenario in the current study.

The life/time dimension reflects life history, and emphasis is placed on life movement. To facilitate internal processes in the life/time dimension, four structured exercises are used: stepping stones, life history log, intersections, and time-stretching. The second topic area, the depth dimension, involves the symbolic representations of life's movement. The subsections for the depth dimension include a dream log, dream enlargements, twilight imagery, imagery extensions, and inner wisdom dialogue. The third dimension, the dialogue dimension, has to do with inner dialogue or communications that involve other people, important institutions, or life activities. Subsections for the dialogue dimension includes dialogue with persons, dialogue with works, dialogue with body, dialogue with events/situations/circumstances, and dialogue with society. In the Intensive Journal method, the fourth dimension is the meaning dimension, which involves beliefs that give life meaning. Subsections for the meaning dimension are meditation log, connections, peaks/depths/explorations, mantra/crystals, and testament. For all subsections, there are exercises that guide the journal entries and directions for working with written entries. The writer moves from one section of the journal to another, and with each exercise the aim is to capture inner movement that is dynamic and promotes understanding and
meaning for the writer's experience. The separate sections are tied together in different ways by moving within the journal sections. The ongoing cross-referencing and connecting of exercises is meant to have an integrative effect much like many streams feeding into one river (Progoff, 1975).

Childress (1999) points out how Progoff (1975) underscores the necessity of processing entries that were made in solitude with others. The process required the assistance and presence of others (Progoff, 1975). In Progoff's conception, trained journal consultants would use techniques to facilitate depth of exploration. The role of others in the journal writing process makes the use of the Intensive Journal method amenable to translation into the text-based exchanges between client and counselor that happen on the Internet. The counselor might serve as a guide who leads a client through a series of exercises, and by doing so facilitates a dynamic process of personal growth. According to Childress,

if such interactive e-mail journaling were to occur solely within an Internet-based relationship, the Intensive Journal method of Progoff offers the online therapist a structured model for developing the client's material within a text-only medium. . . .

[T]he Intensive Journal method developed by Progoff, with its nonlinear approach and use of structured exercises, offers a method for providing the dynamic intensity necessary for personal growth and change in the altered interpersonal relationship afforded by online communication. (p. 8)

The revised treatment scenario used an interactive Intensive Journal structure as the guiding theory for intervention with the client. The revised treatment scenario was judged by experts to have elements of a working alliance and some level of intimacy.
The second phase of scenario materials development had various steps, but was two-fold in purpose. First, the phase involved validation of the content for both the treatment and alternate scenarios given revisions to the alternate scenario. Second, it included a manipulation check to ensure that the alternate treatment scenario did not vary from the treatment scenario on dimensions other than the intended dimensions of having a working alliance and intimacy. This required significant revisions of the original alternate treatment scenario. The systematic modifications to the treatment scenario, as well as the reliability and content validity process of both scenarios, is described next.

The exact text of the treatment scenario was used as the basis of the alternate treatment scenario to ensure that the length of sentences, total paragraph number of words, and choice of words were exactly the same. Then, each paragraph of the treatment scenario was examined to determine what aspect of a working alliance or intimacy the text communicated. This review consisted of reading each paragraph followed by reading every item from the Working Alliance Inventory - Observer Form (Horvath & Greenberg, 1989) to determine if any item included in the inventory was communicated in the paragraph under review. In other words, each paragraph was read to determine if any of the 36 items of the WAI-O were represented in the paragraph. For identified paragraphs, a truncated version of the WAI-O item was then written below the paragraph in bold letters. For instance, a paragraph that communicated the item "The client and counselor are working towards mutually agreed upon goals," was truncated as "client and counselor agree on goals." As is described more below, the bolded phrases were used to quantify expert agreement on the content of the scenario. Using the same review method, each paragraph was also analyzed for elements of intimacy included in the RCS-I.
Additionally, each paragraph of the treatment scenario was reviewed for ways of communicating intimacy through text-based CMC as identified by Walther and Burgoon (1992). For instance, Walther and Burgoon wrote that a sense of receptivity is communicated through text by self-disclosure or through a written acknowledgement of what another communicated. As such, the counselor exchanges that included quotes from the client's previous e-mail message were followed by a statement such as "related to what client said/ counselor is receptive." Subsequently, as was the case with the WAI-O and RCS-I reviews, a bolded statement was written below any paragraph that was determined to have elements of intimacy.

How exactly the alternate scenario was developed seems important, therefore the method for creating the alternate scenario is specified next. First, the treatment scenario was copied and pasted into a word processing program. Second, because each paragraph of the treatment scenario was identified as having communication that reflected working alliance or intimacy elements, these communications were modified in the alternate scenario so that the paragraph no longer communicated a working alliance or intimacy. For instance, a paragraph that communicated the counselor and client agreement of counseling goals in the treatment scenario, which is an indicator of a working alliance, was modified to communicate that there was no clear agreement of counseling goals in the alternate scenario. As another example, instances when the treatment scenario included part of what the client said in the counselor's response, which would indicate receptivity according to Walther and Burgoon (1992), were substituted with statements unrelated to what the client said in the alternate scenario. Therefore
the alternate scenario was systematically modified on the identified working alliance and intimacy communications that were present in the treatment scenario.

The specific process of modifying the treatment scenario to create an alternate scenario was described above, however, further clarification is also necessary with respect to the general way that the alternate scenario differs from the treatment scenario. It was determined after sampling the World Wide Web, that self-identified mental health professionals offer consultation-based as well as counseling-oriented services. The consultation format, which was typically one question followed by an informative answer (e.g., www.cyber-psych.com) by a professional, were akin to the type of responses made to callers of a talk radio show in terms of quality of interaction. Example "Q&A" or "FAQ" exchanges were used as a model for the alternate scenario. As such, the treatment scenario referred to the professional as a counselor, but the alternate treatment scenario has the word consultant substituted for the word counselor.

In addition to the counseling-consultant distinction, the alternate scenario has another difference to mention. In the treatment scenario there were activities that the counselor suggested to the client that are consistent with the Intensive Journal theoretical framework (Childress, 1999; Progoff, 1975, 1992). These exercises were used in the treatment scenario to facilitate client self-exploration and encourage depth of introspection. Since the alternate scenario was not intended to represent depth of exploration, the alternate scenarios did not include these exercises. Instead, the consultant in the alternate scenario asked the client closed questions that were related to relationship issues, which was the presenting problem in the treatment scenario. For example, the treatment scenario statement "What luck or misfortunes did you encounter?" was modified to "Do you encounter luck or misfortune?" Further, to
ensure that these questions were of a "popular magazine" nature, the questions were modeled after questions included in instruments identified as "for fun" tests available at www.queendom.com. The specific questions included in the alternate scenario were chosen based on content equivalence, however, to prevent the introduction of any new variables into the alternate scenario. In particular, the questions were modeled after "for fun" questions that had to do with relationships or communication skills since these were also the topics addressed in the treatment scenario. As an example, the treatment scenario question "What family events, work involvements, or social events were part of this period?" was modified to "Do family events, work involvement, or social events leave you feeling baffled?" Attempts were made to select questions for the alternate scenario that mirrored the specific topic addressed in the treatment scenario. For example, if in the treatment scenario the topic of a specific paragraph was about the client's mother, then correspondingly the "for fun" type question was about the client's mother.

Two final differences between the treatment and alternate scenarios have to do with: (a) instances in which the counselor in treatment scenario quotes what the client wrote in a previous message, and (b) discussion about the limits of confidentiality. With respect to modifying client quotes, one of two substitutions was made, depending on the place in the exchanges where a quote appeared. In one instance the client quote was modified to a "saying" the consultant heard (i.e., my mother always said), but the remaining quotes were modified to superficial questions as described above (i.e., queendom). The intention for both types of substitution was to communicate something not related to what the client said in a previous e-mail.
Specific to the discussion of confidentiality, the treatment scenario explained the limits of e-mail regarding how safe CMC is, efforts related to encrypt e-mails, password protection to encrypted e-mail by the counselor, and a recommendation from the counselor for the client to secure exchanges on the client's computer. In contrast, the alternate scenario mentions unauthorized 3rd party interception of e-mails but went on to state that the counselor kept e-mails for years, that consultant exchanges were received on a family computer, and that the client should keep messages they exchanged as long as the client needed them. Likewise, the consultant in the alternate scenario did not acknowledge the limits on the scope of problems that e-mail exchanges were appropriate for.

Considering how the treatment and alternate scenarios were developed above, it is appropriate to state the reliability and validity evidence about the scenarios. As stated previously, the treatment and alternate scenarios were analyzed to determine places in the text exchanges where there were communications of a working alliance or intimacy. Again, for each paragraph that included an example or non-example of the constructs of interest, there was a statement that specified how the working alliance or intimacy was or was not communicated in the text. Five expert reviewers were recruited through convenience to the principal investigator. The criterion for expert selection was that he or she had or was near completion of a doctoral degree. The experts were told that the scenarios were two variations of a counselor and client dyad interaction, and they were instructed to read the scenarios with the dual purposes of doing a content analysis and a manipulation check. Specifically, for the content analysis the experts were asked to indicate whether they agreed or disagreed with each statement that was in bold text. For example, the first paragraph the reviewers read was
followed by the statement "has clear reason/goal for contact." If the expert agreed, she or he would put a "Y" next to the line. The expert reviewers were also asked the question "Do you think that the scenarios differ on any other dimensions besides the ones identified in bold text?" at the end of the second scenario.

There were 202 places in the text where the five experts indicated either agreement or disagreement with the scenarios' content. A method of inter-rater reliability was used to calculate a percent of agreement among the different observers, and the inter-rater reliability was .97. According to Murphy and Davidshofer (1994), the only aspects that differentiate inter-rater reliability from content validity are the presence of a defined content domain and the inclusion of experts as the raters (Murphy & Davidshofer, 1994). How the content validity was established for the current study is elucidated below.

First, the content areas judged were clearly defined domains based on the WAI-O and RCS-I items, as well as the Walther and Burgoon (1992) guidelines. The scenarios were shaped so that the constructs from the two instruments were reflected in the treatment scenario content. Specifically, each item from the WAI-O and RCS-I instruments was reviewed to determine if it was reflected in the scenario. This was done by reading a paragraph from the treatment scenario, then reading each item from the scales with the intent of identifying if the item was represented in the exchange. If the paragraph did not contain any elements, then the next paragraph was read followed by the item reviews. Subsequent paragraphs were read until an item was identified. If at the end of reading the entire treatment scenario a specific item from either instrument was not represented anywhere in the text, the scenario was reviewed to determine where in the treatment scenario it could be incorporated. Once a place was located,
more text was added to the scenario to incorporate the item into the scenario. As such, the original scenario rated by experts of online counseling was revised, but no content was removed from the scenario. Rather, the scenario was either supplemented by additional material or modified in the order of presentation. Likewise, the Walther and Burgoon (1992) guidelines were reviewed for comparison between the scenario and the guidelines. For example, use of the word "we" was described by Walther and Burgoon as being a collaborative word that in asynchronous CMC communicated involvement. The same process used to ensure that each guideline was reflected in the treatment scenario was the same process that is described above for including items from the WAI-O and RCS-I instruments in the treatment scenario.

Second, the current scenarios had evidence of content validity because there were two times when experts reviewed the materials. Initially the contents of the scenarios were determined as representative of having a working alliance and as having intimacy by experts of online counseling. Later the inter-rater reliability was calculated using a second group of experts who judged the content of the scenarios. As such, there were two separate examinations of the materials used to establish the validity of the content, and both examinations included experts as judges. Consequently, the agreement among experts who judged the scenarios provided content validity evidence.

Research Questions, Hypotheses, and Analyses

There are two questions to be answered in the current study. The two questions and subsequent hypotheses are listed below. The analyses that were used are also included in the list.
1. Do counselors perceive that a relationship having therapeutic qualities develops when client and counselor interactions are text-based and computer mediated?

Hypothesis 1: There is no significant difference between adjusted WAI-O and RCS-I ratings of the treatment group and the adjusted WAI-O and RCS-I ratings of the alternate treatment group.

Analysis of Hypothesis 1: Multivariate Analysis of Covariance

2. What is the relationship between relational communication ratings of intimacy, the working alliance, clinician's assumptions about counseling, and clinicians' perceptions about e-mail usefulness/ease of use when counseling occurs by electronic mail?

Hypothesis 2: There is no correlation between the WAI-O and the RCS-I scores for the treatment and alternate treatment groups.

Analysis of Hypothesis 2: Bivariate Correlation

Hypothesis 3: There is no correlation between combined WAI-O and RCS-I scores and the Perceived Usefulness and Ease of Use Scale scores for the treatment and alternate treatment groups.

Analysis of Hypothesis 3: Multivariate Analysis of Covariance

Hypothesis 4: There is no correlation between combined WAI-O and RCS-I scores and scores on the CTPS.

Analysis of Hypothesis 4: Multivariate Analysis of Covariance
CHAPTER 4

RESULTS

In the results below there is first a discussion of general procedures for processing and analyzing the data. This is followed by a description of the sample and the statistical findings specific to each hypothesis.

Prior to conducting any statistical analysis the data were reviewed for completeness of participants' responses. Conducting a frequency count for each of the 121 questions using the Statistic Package for the Social Sciences (SPSS) software facilitated the item review. It was determined that while most values were completed, there were instances of missing data. In cases when a participant completed all values except for one or two missed values, the value of 4 was assigned, which was the neutral response to all four of the scales used in the study. For the five items with a missing value, there were no more than 2 participants who left an item unanswered.

For item 7 on the Ease of Use and Usefulness scale, however, there was no response for half of the participants. A statistics expert was consulted to determine how to treat the infrequency of the responses to item 7. Because participants completed all other items in the 12-item scale, and they answered a similar question in item 6, it seemed appropriate to perform a calculation on all scores to offset missing responses to item 7. Specifically, the average of the completed responses for all participants was calculated regardless of whether they answered item 7 or not. That average was then multiplied by 12, the total number of items in the scale, to yield a total score for the instrument. This approach seemed more reasonable than the alternative of not using the data from a given participant or the option of entering a zero, both
of which would distort the remaining intact values for the scale. There were three approaches used to determine if the calculation distorted the raw data for which there were missing values to item 7. First, the unadjusted data (i.e., the summation of the raw data with missing values on item 7) and the adjusted data (i.e., the summation of the averaged raw data) were compared using descriptive statistics. The analysis yielded similar range, mean, standard deviation, and standard error estimates for the unadjusted and adjusted data. Second, the unadjusted and adjusted totals were analyzed for outliers in the data. This was done by using a boxplot that graphically represented the dispersion of scores for each group (see Figure 1). As is illustrated by the boxplot, there was little dispersion of scores. Finally, there was an analysis of correlational data between the unadjusted and adjusted scores, which included calculating a bivariate correlation and review of a scatterplot. There was a correlation of $r_{bis} = .995$ between the pair of scores that is illustrated in the scatterplot (see Figure 2). Based on the information above, it was concluded that adjusting the raw data did not distort the data.

There were three participants who completed entire scales but then omitted other scales, so their scores were dropped prior to data analysis. It is also worth noting that despite numerous trials to test the effectiveness of the GCI script, one item from the Relational Communication Scale-Intimacy was lost during the data submission process. Upon a follow-up inspection of the CGI script data form handler, it was found that the absence of one comma resulted in no data for one of the receptivity/trust questions. As such, the RSC-I had 33 rather than 34 items to analyze.

Next, the observed scores were totaled then transformed to z-scores using SPSS. The z-scores were transformed to t-score values to make the data more amenable to statistical
analysis. Then, a Multivariate Analysis of Covariance (MANCOVA) was run through the SPSS program with the Working Alliance Inventory and Relational Communication Scale-Intimacy identified as the dependent variables along with the Perceived Usefulness and Ease of Use Scale and Counselor Theoretical Position Scale as covariates. Finally, bivariate correlation analyses were run to determine relationships among the dependent variables and covariates.

Before listing the results, the assumptions in MANOVA are reviewed to demonstrate that the data were appropriate for such an analysis. According to Stevens (2002), there are three assumption for MANOVA: (a) observations are independent, (b) observations on the dependent variables follow a multivariate normal distribution, and (c) population covariance matrices for the dependent variables are equal. First, Glass and Hopkins (1984, cited in Stevens 2002) state that independence is tenable whenever treatment is administered independently and observations are independent. The current study meets this assumption because each participant completed the instruments individually. Second, to establish normality, Stevens recommended checking both bivariate normality and marginal normality for individual variables. After consultation, the recommendation was made to use SPSS to generate histograms for a graphical check of each item on all 4 instruments. Visual examination showed that frequency distributions were suitable to satisfy the normality assumption. In addition, each variable was run through SPSS to get the Shapiro-Wilk statistical test for marginal normality. All four instruments were not statistically significant. As such, the variables do not deviate from normality on a univariate level. Third, the homogeneity of covariance matrices was tested using the Box Test, which tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups (Stevens, 2002). When calculated through SPSS,
the test indicated that there was no statistically significant difference in the covariance matrices. Having met all three MANOVA assumptions, it was determined that the data did not need any transformations prior to the analysis. Results of the analyses are described below.

**Demographics**

E-mail recruitment letters were sent to faculty at 45 CACREP accredited colleges and universities. Twelve of the faculty declined to participate, although it is not clear why they declined, while three schools no longer had doctoral programs. The demographic make-up of the sample is described below.

To determine if the groups differed significantly on demographics that random group assignment did not correct for, a chi-square analysis on race, gender, and geographical region, and an analysis of variance (ANOVA) on age, years of e-mail experience, years of WWW experience, and years of clinical experience was conducted. No significant differences were found for race, $\chi^2 (4, N = 76) = 2.616, p = .624$, gender, $\chi^2 (1, N = 76) = 1.537, p = .215$, or geographical region, $\chi^2 (18, N = 76) = 16.255, p = .575$. No significant differences were found for age, $F (1,74) = .211, p = .647$, years of e-mail experience, $F (1, 70) = .049, p = .825$, years of WWW experience $F (1, 71) = .769, p = .383$, and years of clinical experience, $F (1, 71) = .536, p = .467$. Therefore, the groups were demographically equivalent. See Table 1 and Table 2 for participants' demographic information.

Though 79 people participated, not all who responded answered all of the instruments. Three people were dropped from the data prior to analysis for not completing at least one of the four instruments. Of the 76 participants who responded to all the study instruments, 74 (97.4%) indicated their sex (see Table 1). Twenty-five were male and 49 were female, but 2 left the
response blank. Broken down by group, in the treatment group there were 29 females, and the alternate group included 20 females. Racially, there were a total of 64 participants who identified themselves as European American, 5 who identified themselves as African American, 3 who identified themselves as Latino or Latina, 1 who identified him or herself as Asian American, and 3 who specified "other"\(^2\). Broken down by group, in the treatment group there were 37 European American, 2 African American, 1 Latino/Latina, and 2 "other" participants. In the alternate group there were 27 European American, 3 African American, 2 Latino or Latina, 1 Asian, and 1 "other" participants.

There were 76 participants who indicated their age, and the mean age was 36.86 years ranging from 23-60. Broken down by group, the treatment group \((n = 42)\) had a mean age of 36.36 ranging from 23-56 years of age while the alternate group \((n = 34)\) had a mean age of 37.47 ranging from 24-60 years of age. Geographically, the sample represented 17 different states.

There were three sources of experience gathered from the participants (see Table 2). As stated above, the groups were not significantly different statistically on all three sources of experience. First, the participants reported years of clinical experience \((N = 73)\). The mean was 4.86 years with a range of 0 to 15 years. In the treatment group \((n = 40)\) the mean number of years of clinical experience was 4.59 with a range of 0-13, and the alternate group \((n = 33)\) had a mean of 5.20 years of clinical experience with a range of 0-15 years. There were 3

\(^2\) The authors of the CGI form handler script specifically warned against multiple responses for any given item on a survey to be submitted using their script. As such, the racial make-up does not reflect if participants were biracial.
participants who did not answer the question about years of clinical experience. A second source of experience information was WWW experience ($N = 73$). The sample mean was 6.95 years ranging from 1 to 12 years. The treatment group ($n = 40$) had a mean of 6.74 years with a range of 1 to 10 years, and the alternate group ($n = 33$) had a mean of 7.21 years of WWW experience ranging from 2 to 12 years. Again, there were 3 participants who did not answer the question. A final source of the sample's experience was how many years of e-mail experience the participants had. For the participants who answered ($N = 72$), the mean was 7.09 years ranging from 2 to 12 years. The treatment group ($n = 39$) had a mean of 7.04 years of e-mail use ranging from 3 to 11 years, and the alternate group ($n = 33$) had a mean of 7.15 years of e-mail use ranging from 2 to 12 years. There were 4 participants who did not answer the question.

It was important to have a representative design that had an environment that accurately reflected real-life environments and natural settings of participants. As such, participants were asked about the environment in which they took the instruments. Having the scenarios online created naturally varying environments where participants completed the study, and participants were in familiar settings that they used for Internet access. This allowed participants to engage in their typical range of behaviors during Internet access, but it was important to ask them how many people were around or notable distractions that happened as they read and completed the online materials. Participants ($N = 76$) reported a mean of .19 people in the environment ranging from 0 to 6 people with a mode of 0. The treatment group ($n = 42$) reported a mean of .23 people ranging from 0 to 6 people (mode = 0), and the alternate group ($n = 34$) reported a mean of .18 people ranging from 0 to 3 (mode = 0). When asked if
there were any distractions in the environment where they completed the study, there were various answers, although the majority (69.2%) reported no distractions. Of the participants who noted distractions, the type of distractions included others talking in the background (12.6%), music (5.5%), TV (4.2%), general household sounds (e.g., vacuum, computer printer) (4.2%), and participants' child or other children in the area (2.8%).

*Psychometrics of Instruments*

The four scales used in the study were the Working Alliance Inventory - Observer Form, the Relational Communication Scale-Intimacy subscale, the Perceived Usefulness and Ease of Use Scale, and the Counselor Theoretical Positions Scale. Each is discussed separately below.

*The Working Alliance Inventory - Observer Form (WAI-O).* The Working Alliance Inventory - Observer Form yields both one general working alliance and three subscale scores for the process variables of task, goal, and bond (Horvath & Greenberg, 1986, 1989). The WAI-O (see Appendix C) is a 36-item instrument that uses a 7-point Likert-type scale to rate the degree of agreement with statements about counseling interactions. The individual item responses are summed for a total score that ranges from 36 to 252, with a higher score indicating a greater working alliance.

For all participants \((N = 76)\), the mean score was 128.58 and \(SD = 51.21\) \((SEM = 3.75)\), and the 95\% confidence interval was \([116.85 \geq x \geq 131.81]\) (see Table 3). For the treatment group \((n = 42)\), the mean score was 164.61 and \(SD = 35.54\) \((SEM = 5.04)\), and the 95\% confidence interval was \([154.62 \geq x \geq 174.71]\). For the alternate group \((n = 34)\) the mean score was 84.01 with \(SD = 27.82\) \((SEM = 5.61)\), and the 95\% confidence interval was \([72.83 \geq x \geq \)
As can be seen with the confidence intervals, the treatment and alternate treatment groups true mean scores differ. This indicates that treatment group participants, whose scenario included elements of a working alliance, perceived that there was a working alliance through CMC. Specifically, their responses indicated that it was somewhat to moderately true that they perceived a working alliance. This is not the case with the alternate treatment group participants whose ratings reflect that they did not perceive of the scenario as including a working alliance. Their responses indicated that it was a little to slightly true that they perceived a working alliance through CMC.

For the global WAI-O ($N = 76$), a coefficient alpha reliability estimate of .97 was calculated. The coefficient alphas for the WAI-O subscales ($N = 76$) were .93 for goal, .94 for task, and .92 for bond. The chronbach internal consistency reliability estimates indicate an acceptable level of reliability for this study with all alphas $\geq .92$.

*Relational Communication Scale-Intimacy Subscale (RCS-I).* The RCS-I (see Appendix D) is a 34-item subscale that reflects 5 dimensions of intimacy (involvement, affection, receptivity/trust, depth, and similarity/inclusion). The scale includes items that are rated on a 7-point Likert type scale. RCS-I scores can range from 34 to 238 with higher scores indicating a higher degree of intimacy (Burgoon & Hale, 1987). As described above, however, only 33 items were transmitted during electronic submission of responses. Therefore the scores for this 33 item instrument ranged from 33 to 231.

For all participants ($N = 76$), the mean score was $126.73$ with $SD = 45.54$ ($SEM = 2.92$), and the 95% confidence interval was $[120.91 \leq x \leq 132.56]$ (see Table 3). For the treatment group ($n = 42$), the mean score was $164.39$ and $SD = 36.23$ ($SEM = 3.92$), and the
95% confidence interval was $[156.58 \leq x \leq 172.21]$. In the alternate treatment group ($n = 34$) the mean score was 89.07 and $SD = 26.36$ ($SEM = 4.36$), and the 95% confidence interval was $[80.38 \leq x \leq 97.77]$. As can be seen with the confidence intervals, the treatment and alternate treatment groups true mean scores differ. This indicates that treatment group participants, whose scenario included elements of intimacy, perceived that there was intimacy communicated through CMC. Their responses indicated that they were neutral to somewhat in agreement that they perceived intimacy in CMC. This differs from the alternate treatment group participants whose ratings reflect that they did not perceive of the scenario as including intimacy. Their responses indicated that they disagreed that there was intimacy in their CMC scenario.

For the RCS-I, a coefficient alpha reliability estimate of .98 was calculated. The coefficient alphas for the subscales were .94 for involvement, .91 for affection, .93 for receptivity/trust, .90 for depth, and .88 for similarity/inclusion. The internal consistency reliability estimates indicate an acceptable level of reliability for this study with all alphas $\geq .88$.

**Perceived Usefulness and Ease of Use Scale.** The Perceived Usefulness and Ease of Use Scale (see Appendix E) is intended to measure what causes people to accept or reject information technology (Davis, 1989). The ease of use subscale measures the degree to which a user believes that a system will be free of effort. The perceived usefulness subscale measures the extent to which people believe a certain technology will help them perform a task. Each subscale has six items, making the entire instrument 12 items long. Agreement with statements
are reported using a 7 point Likert type scale. Each subscale is totaled to yield scores that range from 6 to 42 with lower scores indicating greater perceived usefulness and greater ease of use.

For all participants (N = 76), there was a mean score of 21.92 with \( SD = 9.13 \) (\( SEM = 1.06 \)), and the 95\% confidence interval was \([19.80 \geq x \geq 24.04]\) (see Table 3). By subscales, there was a mean score of 11.92 with \( SD = 6.09 \) (\( SEM = .69 \)) on the usefulness subscale, and a mean score of 9.14 with \( SD = 4.22 \) (\( SEM = .48 \)) on the ease of use subscale. When looking at how the scores were distributed, 95\% of the participants' scores were at or below 24.6 on the usefulness subscale, so there was a positive skew to the distribution of scores. In other words, the majority of participants agreed that e-mail was "extremely" to "quite" usefulness. Specific to the ease of use subscale, 95\% of the scores were at or below 17.5, and the scores were also positively skewed. Again, the majority of ease of use subscale scores were positive in valence. Taken as an entire instrument, the Perceived Usefulness and Ease of Use Scale scores indicate that the majority of all participants (\( N = 76 \)) reported agreeing that in their perception, e-mail was useful and easy to use.

For the treatment group (\( n = 42 \)), there was a mean score of 22.95 with \( SD = 9.44 \) (\( SEM = 1.421 \)), and the 95\% confidence interval was \([20.12 \geq x \geq 25.78]\). On the usefulness subscale, there was a mean score of 12.79 with \( SD = 6.40 \) (\( SEM = .99 \)), and the 95\% confidence interval was \([10.79 \geq x \geq 14.78]\). For the ease of use subscale, there was a mean score of 9.08 with \( SD = 3.74 \) (\( SEM = .58 \)), and the 95\% confidence interval was \([7.91 \geq x \geq 10.25]\). In the alternate treatment group (\( n = 34 \)) there was a total mean score of 20.89 with \( SD = 8.77 \) (\( SEM = 1.58 \)) and the 95\% confidence interval was \([17.74 \geq x \geq 24.04]\). On the usefulness subscale, there was a mean score of 10.85 with \( SD = 5.60 \) (\( SEM = .96 \)), and the 95\% confidence interval was \([8.89 \geq x \geq 12.88]\).
On the ease of use subscale, there was a mean score of $9.21$ with $SD = 4.81$ ($SEM = .82$), and the 95% confidence interval was $[7.53 \geq x \geq 10.88]$. In other words, for the full scale and subscale scores, participants in both the treatment and alternate treatment groups agreed that e-mail was "quite" to "extremely" useful and easy to use. The groups did not differ significantly from each other on the full scale or subscale scores.

The Perceived Usefulness and Ease of Use Scale had a coefficient alpha reliability estimate of .92. The coefficient alpha for the subscales were .92 for ease of use and .84 for usefulness. The internal consistency reliability estimates indicate an acceptable level of reliability for this study with all alphas $\geq .84$.

**Counselor Theoretical Position Scale (CTPS).** The Counselor Theoretical Position Scale is intended to measure the dimensions of beliefs about therapeutic practice that influence counselor training, supervision, and practice (Poznanski & McLennan, 1999). These dimensions represent conceptual accounts of counseling processes and psychological problems as well as distinctive kinds of therapeutic intervention techniques. The CTPS is comprised of two 20-item subscales, the Rational-Intuitive and Objective-Subjective (see Appendix F). The items are rated using a 7-point Likert type scale. Scores from items for each subscale are totaled, and scores for both subscales can range from 20 to 140. High subscale scores indicate a preference for rational and for objective beliefs.

For all participants ($N = 76$), there was a full scale mean score of $140.02$ with $SD = 21.24$ ($SEM = 2.42$), and the 95% confidence interval was $[135.19 \geq x \geq 144.83]$ (see Table 3). For the Rational-Intuitive subscale, there was a mean of $62.22$ with $SD = 11.76$ ($SEM = 1.35$), and the 95% confidence interval was $[59.54 \geq x \geq 64.91]$. In other words, the participants
associated more with intuitive than rational beliefs about therapeutic practices that influence
counselor training, supervision, and practice. For the Objective-Subjective subscale there was a
mean score of 77.89 with $SD = 13.61$ ($SEM = 1.56$), and the 95% confidence interval was
$[74.78 \geq x \geq 81.00]$. This suggests that participants ($N = 76$) believed equally in objective and
subjective therapeutic practices.

For the treatment group ($n = 42$), the full scale mean score was 141.00 with $SD = 22.11$
($SEM = 3.23$), and the 95% confidence interval was $[134.56 \geq x \geq 147.45]$. For the Rational-
Intuitive subscale, there was a mean of 63.02 with $SD = 11.07$ ($SEM = 1.71$), and the 95%
confidence interval was $[59.57 \geq x \geq 66.47]$. Said another way, treatment group participants
associated more with intuitive than rational beliefs about therapeutic practice that influence
counselor training, supervision, and practice. For the Objective-Subjective subscale there was a
mean score of 77.98 with $SD = 13.96$ ($SEM = 2.15$), and the 95% confidence interval was
$[73.63 \geq x \geq 82.33]$. As such, the treatment group participants believed equally in objective and
subjective therapeutic practices. For the alternate treatment group ($n = 34$) the full scale mean
score was 139.03 and $SD = 19.81$ ($SEM = 3.42$), and the 95% confidence interval was $[131.87 \geq x \geq 146.19]$. For the Rational-Intuitive subscale, there was a mean of 61.24 with $SD = 12.65$
($SEM = 2.17$), and the 95% confidence interval was $[56.82 \geq x \geq 65.65]$. In other words,
participants agreed more with intuitive than rational beliefs about therapeutic practices that
influence counselor training, supervision, and practice. For the Objective-Subjective subscale
there was a mean score of 77.79 with $SD = 13.38$ ($SEM = 2.29$), and the 95% confidence
interval was $[73.13 \geq x \geq 82.46]$. This suggests that the alternate treatment group believed
equally in objective and subjective therapeutic practices.
For the CTPS \((N = 76)\), a coefficient alpha reliability estimate of .85 was calculated. The coefficient alphas for the subscales were .80 for the rational-intuitive subscale and .82 for the objective-subjective subscale. The internal consistency reliability estimates indicate an acceptable level of reliability for this study with all alphas \(\geq .80\).

**Hypothesis 1**

To test the hypothesis that there is no significant difference between adjusted WAI-O and RCS-I ratings of the treatment group and the adjusted WAI-O and RCS-I ratings of the alternate treatment group, a MANCOVA was performed. While controlling for the covariates, there was statistical significance observed at the multivariate-level (Wilk's lambda). With an alpha level of .05, the effect of group condition was statistically significant, \(F (2, 71) = 80.69, p < .000\). For more detailed analysis see Table 4. As can be seen, there was a statistically significant difference between the treatment and alternate treatment groups on the working alliance and relational communications of intimacy. The null hypothesis that there were no group differences was therefore rejected. As noted in Table 4, the estimate of power for the group condition was 1.0, which means the probability of detecting the stipulated effect size was 100%. Eta squared was .694, which is a variance-accounted for index of effect size. According to Thompson (2002), the eta squared effect "tells what percentage of the variability in individual differences of the participants on the outcome variable can be explained or predicted with knowledge of the group or cell membership of the participants" (p. 68). In the current study, this means that 69.4% of the dependent variables, the working alliance and relational communications of intimacy, was explained by group condition.
The covariates are discussed next. The Perceived Usefulness and Ease of Use Scale was statistically significant, \( F(2, 71) = 10.868, p < .000 \). The total variability in the combined dependent variables accounted for by the Perceived Ease of Use and Usefulness factor was \( \eta^2 = .234 \), or 23.4%. In other words, participants' acceptance or rejection of information technology, in this case a positive valence toward e-mail helpfulness to perform a task and being free of effort, contributed significantly to dependent variable variance. In contrast, the CTPS covariate was not statistically significant, \( F(2, 71) = .628, p = .536 \). In other words, the total variability in the dependent variables accounted for by the CTPS factor was \( \eta^2 = .017 \), or 1.7%. It was expected that both covariates would contribute significantly to participants' ratings of the working alliance and relational communications of intimacy. The data, however, indicate that only the extent to which people believe a certain technology will help them perform a task and the degree to which a user believes that a system will be free of effort were noteworthy. Observed power for the CTPS was .151, and for the Perceived Usefulness and Ease of Use Scale power was .988. In other words, the probability of avoiding a Type II error for the CTPS was 15.1% and for the Perceived Usefulness and Ease of Use Scale was 98.8%. For Perceived Usefulness and Ease of Use Scale, power was adequate to prevent such an error. For the CTPS, however, it is difficult to determine if there really was an effect of this covariate on dependent variable measures because it was not detected statistically.

The univariate significance is discussed next. The analysis calculated is detailed in Table 5. There was significance observed at the univariate-level for the RCS-I with the Perceived Usefulness and Ease of Use covariate. The effect of Perceived Usefulness and Ease of Use was statistically significant for RCS-I scores \( F(1, 71) = 12.410, p < .001, \eta^2 = .147, \)
power = .935. As such, a significant amount of variance in the dependent measure RCS-I was associated with the covariate. In other words, 14.7% of the relational communications of intimacy variable was explained by positive beliefs about e-mail usefulness and ease of use. The probability of avoiding a Type II error was 93.5%, and this is adequate. The effect of Perceived Usefulness and Ease of Use was not statistically significant for the WAI-O scores $F(1, 71) = 1.085, P = .301, \eta^2 = .015$. Power was estimated as .177. Given the low power, however, it is difficult to determine if there really was an effect of this covariate on working alliance scores that went undetected.

Hypothesis 2

To test the hypothesis that there is no correlation between the WAI-O and the RCS-I scores for the treatment and alternate treatment groups, a bivariate correlation was conducted (see Table 6). There was a significant correlation $r_b = .919$ observed between the dependent variables. As such, the null hypothesis that there is no relationship between the instruments is rejected. Said differently, 84.46% of the variance observed in the WAI-O scores was accounted for by the RCS-I scores. This indicates that the concepts measured by the Working Alliance Inventory - Observer form and the Relational Communications Scale - Intimacy subscale share a significant portion of their constructs.

Hypothesis 3

To test the hypothesis that there is no correlation between combined WAI-O and RCS-I scores and the Perceived Usefulness and Ease of Use Scale scores for the treatment and alternate treatment groups, the MANCOVA multivariate tests output were reviewed as represented in Table 4. As stated above in hypothesis 1, the Perceived Usefulness and Ease of
Use Scale was statistically significant, $F(2, 71) = 10.868, p < .000, \eta^2 = .234$. The variability in the dependent variables accounted for by the Perceived Usefulness and Ease of Use Scale was .234, or 23.4%. The observed power was .988. In other words, a significant amount of variance in the dependent measures, the combined working alliance and relational communication of intimacy scores, was explained by participants' positive perceptions of e-mail usefulness and ease of use (23.4%). The probability of avoiding a Type II error was 98.8%, and this is adequate to determine if there was an effect. Therefore, the hypothesis is rejected.

**Hypothesis 4**

To test the hypothesis that there is no correlation between combined WAI-O and RCS-I scores and scores on the CTPS, the MANCOVA multivariate tests output from SPSS were reviewed as represented in Table 4. The CTPS covariate was not statistically significant, $F(2, 71) = .628, p = .536$. Consequently, the null hypothesis was retained. The power estimated for the CTPS was .151. In other words, there was not a significant amount of variance in the dependent measures, the combined working alliance and relational communication of intimacy scores, explained by participants' beliefs about conceptual accounts of counseling processes, psychological problems, or therapeutic intervention techniques. Data indicate that an effect would have been detected only 15.1% of the time. For the CTPS it is difficult to determine if there really was an effect of this covariate on dependent variable measures that failed to be detected statistically.

In conclusion, the null hypothesis that there was no significant difference between adjusted WAI-O and RCS-I ratings of the treatment group and the adjusted WAI-O and RCS-I ratings of the alternate treatment group was rejected. Likewise, the null hypothesis that there is
no correlation between the WAI-O and the RCS-I scores for the treatment and alternate treatment groups was rejected. The null hypothesis that combined WAI-O and RCS-I scores and the Perceived Usefulness and Ease of Use scores Scale for the treatment and alternate treatment groups was also rejected. In contrast, the null hypothesis that there is no correlation between combined WAI-O and RCS-I scores and scores on the CTPS was retained.
Figure 1. Boxplot of Total Unadjusted and Total Adjusted Scores on Usefulness/Ease of Use Scale.

Note: Unadjusted Scores = Summation of RCS-I raw data with missing values on item 7, Adjusted Scores = Summation of RCS-I with Averaged Raw Data, 1 = Treatment Group, 2 = Alternate Treatment Group.
Figure 2. Scatterplot of Total Unadjusted and Total Adjusted Scores for All Participants.

Note: Unadjusted Scores = Summation of RCS-I raw data with missing values on item 7,
Adjusted Scores = Summation of RCS-I with Averaged Raw Data.
Table 1

*Sex and Race Description (N = 76)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total N</th>
<th>Treatment N</th>
<th>Alternate N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>49 (64.5%)</td>
<td>29 (69%)</td>
<td>20 (58.8%)</td>
</tr>
<tr>
<td>Male</td>
<td>25 (32.9%)</td>
<td>11 (26.2%)</td>
<td>14 (41.2%)</td>
</tr>
<tr>
<td>Not Specified</td>
<td>2 (2.6%)</td>
<td>2 (4.8%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European American</td>
<td>64 (84.2%)</td>
<td>37 (88.1%)</td>
<td>27 (79.4%)</td>
</tr>
<tr>
<td>African American</td>
<td>5 (6.6%)</td>
<td>2 (4.8%)</td>
<td>3 (8.8%)</td>
</tr>
<tr>
<td>Latino/ Latina</td>
<td>3 (3.9%)</td>
<td>1 (2.4%)</td>
<td>2 (5.9%)</td>
</tr>
<tr>
<td>Asian American</td>
<td>1 (1.3%)</td>
<td>0 (0%)</td>
<td>1 (2.9%)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (3.9%)</td>
<td>2 (4.8%)</td>
<td>1 (2.9%)</td>
</tr>
</tbody>
</table>
Table 2

*Age and Experience Demographics (N = 76)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total</th>
<th></th>
<th></th>
<th>Treatment</th>
<th></th>
<th></th>
<th>Alternate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Age</td>
<td>76</td>
<td>36.86</td>
<td>10.45</td>
<td>42</td>
<td>36.36</td>
<td>10.21</td>
<td>34</td>
<td>37.47</td>
<td>10.85</td>
</tr>
<tr>
<td>Clinical*a</td>
<td>73</td>
<td>4.86</td>
<td>3.53</td>
<td>40</td>
<td>4.59</td>
<td>3.10</td>
<td>33</td>
<td>5.20</td>
<td>4.02</td>
</tr>
<tr>
<td>WWW*c</td>
<td>73</td>
<td>6.95</td>
<td>2.30</td>
<td>40</td>
<td>6.74</td>
<td>2.40</td>
<td>33</td>
<td>7.21</td>
<td>2.18</td>
</tr>
<tr>
<td>E-mail*b</td>
<td>72</td>
<td>7.09</td>
<td>2.14</td>
<td>39</td>
<td>7.04</td>
<td>1.97</td>
<td>33</td>
<td>7.15</td>
<td>2.35</td>
</tr>
</tbody>
</table>

*Note:* a = years of clinical experience, b = years of e-mail experience, c = years of World Wide Web experience.
Table 3: Descriptive Statistics for All Instruments

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Total M</th>
<th>Treatment M</th>
<th>Alternate M</th>
<th>Total SD</th>
<th>Treatment SD</th>
<th>Alternate SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAI-O</td>
<td>128.58</td>
<td>126.73</td>
<td>140.02</td>
<td>27.82</td>
<td>164.66</td>
<td>141.00</td>
</tr>
<tr>
<td>RCS-Ib</td>
<td>45.54</td>
<td>45.54</td>
<td>45.54</td>
<td>35.54</td>
<td>45.54</td>
<td>35.54</td>
</tr>
<tr>
<td>U/EOUd</td>
<td>21.92</td>
<td>21.92</td>
<td>21.92</td>
<td>9.13</td>
<td>22.95</td>
<td>22.95</td>
</tr>
<tr>
<td>CTPS</td>
<td>22.24</td>
<td>22.24</td>
<td>22.24</td>
<td>9.44</td>
<td>22.95</td>
<td>22.95</td>
</tr>
</tbody>
</table>

Note: WAI-O = Working Alliance Inventory - Observer Form, CTPS = Counselor Theoretical Position Scale, RCS-I = Relational Communication Scale - Intimacy subscale, EOU = Perceived Usefulness and Ease of Use.
### Table 4

**Multivariate Effects Summary (N = 76)**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>$F$\textsuperscript{a}</th>
<th>df</th>
<th>Error df</th>
<th>$\eta^2$</th>
<th>$p$</th>
<th>Power\textsuperscript{b}</th>
</tr>
</thead>
<tbody>
<tr>
<td>U/EOU\textsuperscript{c}</td>
<td>Wilks' Lambda</td>
<td>0.766</td>
<td>10.868*</td>
<td>2</td>
<td>71</td>
<td>.234</td>
<td>.000</td>
</tr>
<tr>
<td>CTPS\textsuperscript{d}</td>
<td>Wilks' Lambda</td>
<td>0.983</td>
<td>.628</td>
<td>2</td>
<td>71</td>
<td>.017</td>
<td>.536</td>
</tr>
<tr>
<td>Group</td>
<td>Wilks' Lambda</td>
<td>0.306</td>
<td>80.690*</td>
<td>2</td>
<td>71</td>
<td>.694</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Condition**

*Note: a = Exact statistic, b = computed using alpha = .05, U/EOU = Perceived Usefulness and Ease of Use Scale, CTPS = Counselor Theoretical Position Scale.*

* $p < .000.$
### Table 5

*Univariate Interaction Effects Summary (N = 76)*

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Dependent Variable</th>
<th>$F$</th>
<th>$df$</th>
<th>$\eta^2$</th>
<th>$p$</th>
<th>Power$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTPS$^b$</td>
<td>WAI-O$^c$</td>
<td>.016</td>
<td>1</td>
<td>.000</td>
<td>.901</td>
<td>.052</td>
</tr>
<tr>
<td></td>
<td>RCS-I$^d$</td>
<td>.305</td>
<td>1</td>
<td>.004</td>
<td>.586</td>
<td>.085</td>
</tr>
<tr>
<td>U/EOU$^e$</td>
<td>WAI-O</td>
<td>1.085</td>
<td>1</td>
<td>.015</td>
<td>.301</td>
<td>.177</td>
</tr>
<tr>
<td></td>
<td>RCS-I</td>
<td>12.410*</td>
<td>1</td>
<td>.147</td>
<td>.001</td>
<td>.935</td>
</tr>
</tbody>
</table>

*Note: a = Computed using alpha = .05, CTPS = Counselor Theoretical Position Scale, WAI-O = Working Alliance Inventory - Observer Form, RCS-I = Relational Communication Scale - Intimacy subscale, U/EOU = Perceived Usefulness and Ease of Use.  

$p < .001.$
### Table 6

*Correlations Among all Instruments (N = 76)*

<table>
<thead>
<tr>
<th></th>
<th>WAI-O&lt;sup&gt;a&lt;/sup&gt;</th>
<th>RCS-I&lt;sup&gt;b&lt;/sup&gt;</th>
<th>CTPS&lt;sup&gt;c&lt;/sup&gt;</th>
<th>U/EOU&lt;sup&gt;d&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson $r_b$</td>
<td>1.000</td>
<td>.919(**)</td>
<td>.042</td>
<td>.012</td>
</tr>
<tr>
<td>WAI-O</td>
<td>Sig. (1-tailed)</td>
<td>.000</td>
<td>.720</td>
<td>.918</td>
</tr>
<tr>
<td>N</td>
<td>76</td>
<td>76</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Pearson $r_b$</td>
<td>1.000</td>
<td>.117</td>
<td>-.145</td>
<td></td>
</tr>
<tr>
<td>RCS-I</td>
<td>Sig. (1-tailed)</td>
<td>.314</td>
<td>.211</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>76</td>
<td>76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson $r_b$</td>
<td>1.000</td>
<td>-.180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CTPS</td>
<td>Sig. (1-tailed)</td>
<td>.120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson $r_b$</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U/EOU</td>
<td>Sig. (1-tailed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note:* WAI-O = Working Alliance Inventory - Observer Form, CTPS = Counselor Theoretical Position Scale, RSC-I = Relational Communication Scale - Intimacy subscale, U/EOU = Perceived Usefulness and Ease of Use.

**Correlation is significant at the 0.01 level (1-tailed).
CHAPTER 5
DISCUSSION

The discussion below includes a brief summary of the research problem and method, interpretation of results, a discussion of limitations of the study, implications of findings, and future research directions.

Summary of the Research Problem and Method

In summarizing the research problem, it was assumed that the development of a relationship and subsequent development of a working alliance is possible to communicate through text-based interactions that are intended to articulate the bond, tasks, and goals of computer mediated counseling. Furthermore, people can adapt the way they write in a CMC environment much like how they learn to adjust how they communicate using other technologies, such as audio-only or video-audio communications. There was reason to believe that CMC counseling had the potential to mediate interpersonal messages that were high in relational dimensions early in the interactions. Moreover, the development of a working alliance was expected to be apparent early in the relationship if it appeared at all.

The questions the researcher asked were: (a) do counselors perceive that a relationship having therapeutic qualities develops when client and counselor interactions are text-based and computer mediated; and (b) what is the relationship between relational communication ratings of intimacy, the working alliance, clinician's assumptions about counseling, and clinicians' perceptions about e-mail usefulness/ease of use when counseling occurs by electronic mail? Additionally, it was anticipated that clinicians' perceptions of how useful technology-based counseling is as a viable avenue for
developing a working alliance in counseling was in some part influenced by their views about how useful and easy technology is to use. Hence, it seemed critical to ask about clinicians' attitudes toward technology. Finally, counselors make different assumptions about what they consider appropriate goals and tasks, as well as to what degree the counseling relationship is important throughout counseling. It was conjectured that using CMC for counseling was in part influenced by what clinicians believe are acceptable counseling-related tasks or interventions, which implied a need to ask what effect clinicians' theoretical orientation has on working alliance ratings of CMC counseling.

To answer the research questions, doctoral-level counselor education students in CACREP accredited programs were asked to read e-mail interaction scenarios that occurred in a counselor and client dyad to determine if the counselors perceived that a relationship having therapeutic qualities was present when counseling interactions were text-based and computer mediated. The research was a between group design that used a post-test only with an alternate treatment group condition. Participants were randomly assigned to one of the two conditions, which included one treatment and one alternate treatment condition respectively.

The treatment condition required participants \( n = 42 \) to read a web-based scenario of an e-mail interaction between a counselor and a client. The treatment group scenario contained text interactions that were judged by experts to have a working alliance and intimacy communicated between the counselor and client. Study participants were asked to rate the scenario they read on the strength of the working alliance and the quality of intimacy relational communications, the dependent variables. In accordance
with the research questions, participants also rated themselves on their perceptions about e-mail and assumptions that they make about counseling.

The alternate treatment group \( (n = 34) \), who read the alternate treatment scenario, functioned as a type of control group. They were required to read an e-mail exchange scenario that used the same number of words and sentences, paragraphs, and sentence structure as the treatment scenario. The absence of therapeutic quality and intimate relational communications, however, differentiated the alternate treatment interaction scenario exchanges from the treatment interaction exchanges. Counselors in the alternate treatment group also completed measures of their attitudes toward e-mail technology and assumptions they have about counseling practices. For both groups, the sequences of the instruments were counterbalanced in their administration.

**Interpretation of Results**

*Hypothesis 1.* The first hypothesis was that there is no significant difference between adjusted WAI-O and RCS-I ratings of the treatment group and the adjusted WAI-O and RCS-I ratings of the alternate treatment group. The finding was that there was a significant difference between the adjusted WAI-O and RCS-I ratings for the treatment and alternate treatment groups. This indicates that advanced level clinicians perceived that a relationship having therapeutic qualities developed when client and counselor interactions were text-based and computer mediated. The finding is consistent with three other counseling studies (Barak & Wander-Schwartz, 1999; Day & Schneider, 1999; Schneider, 1999) that support the notion that technology-mediated communications can convey a therapeutic quality relationship. In addition to counseling research, there are
two related CMC studies in the field of communications that also have consistent findings with the current study (Walther, 1994; Walther & Burgoon, 1992).

First, the asynchronous text-based medium in the current study was determined by observers to have therapeutic levels of relationship development, which in the current research was the communication of intimacy and a working alliance. This is consistent with Barak and Wander-Schwartz (1999), who concluded that counseling group members were able to develop group cohesion through a text-based chat room (i.e., real time). Barak and Wander-Schwartz (1999) found that group communications were similar to face-to-face interaction on the group process variables they measured. Although their research was specific to groups and the current study was specific to individual counseling, the group cohesion process variables they measured (i.e., perceptions of cohesion, exposure, expression of feelings, independence, and organization) are comparable to the individual process variables that define the working alliance (i.e., goals, tasks, and bond). In other words, communications of a therapeutic quality were observed in both studies using a text-based CMC medium, and the text-based medium facilitated a therapeutic process.

Second, the current study results demonstrated that it was not the medium itself that dictated the unfolding of the counseling relationship, rather it was which scenario participants read. This is consistent with Schneider (1999) who found that the working alliance for brief individual counseling mediated through audio-only and video-only conditions were comparable to brief face-to-face counseling. There was evidence that as clients and counselors adapted to a communication medium, they were able to circumvent the mediating technology to form a comparable working alliance to face-to-
face counselors (Schneider, 1999). Similarly, Day and Schneider (1999) reported that clinicians who did counseling through audio-only and video-only mediums reported that successful counseling was possible when both the counselor and client adjusted to the technology. The researchers reported that the advanced clinician observers' ratings of the counseling conditions had no difference statistically with regard to working alliance measures, which provided some evidence that the emotional connection did not differ across the different mediums.

In addition to counseling research, the current findings are consistent with CMC research on communicating relational communications using text-based CMC. In the current research, participants in the treatment group reported that the text-based medium communicated intimacy while the alternate group did not. Walther and Burgoon (1992) reported that relational communications of intimacy, composure, relaxation, and dominance were comparable between the face-to-face and CMC groups in their study of asynchronous, text-based CMC. Walther and Burgoon (1992) concluded that minor differences in relational communications between face-to-face and CMC groups became inconsequential with time (Walther & Burgoon, 1992). Likewise, Walther (1994) studied CMC groups in terms of the degree of anticipated future interaction, and found that the length of partnerships made more of a difference than the CMC medium itself. In other words, the actual anticipation of future exchanges using CMC and face-to-face meetings accounted for intimacy and composure, and the communication medium had little effect. Again, although not specific to counseling, the findings are consistent with the current research findings that intimacy can be communicated through text-based CMC and that it is not the CMC medium itself that determines if relational communications are present.
In the current research, there is a further clarification of counseling relationship development, but how to describe the phenomena of text-based CMC used for counseling remains more vague. In other words, if a therapeutic level can be established, in what manner are counseling gains made? Related to understanding the process, there is a need to answer questions about the outcome of text-based, computer-mediated counseling as well as what theory is appropriate to guide CMC interventions. More comprehensive thoughts about related theory and research questions, however, are discussed in the future research section.

Hypothesis 2. The second hypothesis was that there was no correlation between the WAI-O and the RCS-I scores for the treatment and alternate treatment groups. The data indicated that there was a significant relationship between the dependent variables, which was an important finding because the WAI-O and RCS-I appeared to share a construct. The RCS-I accounted for 84.27% of the variability of the WAI-O. There was some variance not shared by the instruments, however, which could help to further define the working alliance. Likewise, the other scales of the entire RCS could complement the WAI conceptualization. Caution has to be applied because these are correlational findings. On the other hand, it is possible that the instruments measured similar constructs given the strong relationship between the general working alliance construct measured by WAI-O and the RCS intimacy subscale. What the overlap or distinctions are between the dependent variables are unclear.

It could be that the RSC-I extends the conceptualization of the bond factor of the working alliance. Hatcher and Barends (1996) pointed out that the construct of the working alliance needed more interpersonally oriented items. In their research, Hatcher
and Barends (1996) had clients complete three different measures of the working alliance and did a factor analysis of the measures jointly. One of their recommendations was to have researchers consider a broader conceptualization of the bond construct that is reflective of affective and interpersonal aspects of the working alliance. For instance, they identified a need to expand the concerns clients have about their freedom to express positive and negative feelings as well as clients' wishes to be closer to the counselor, client concerns about safety and being judged, and perceptions about counselor power in the relationship. It is possible that there are some unique factors within the other subscales of the RCS (Burgoon & Hale, 1984) such as dominance, arousal/ intensity of involvement, formality, nonimmediacy (distance), or composure that could be related to the working alliance construct. Some example questions from the full scale RCS instrument not included in the current study include statements such as the communicator "took control of the conversation," "attempted to persuade (the other) person," "expressed annoyance with (the other) person," and "revealed feelings of tension while talking with (the other) person." These types of interpersonal nuances seem related to affective and interpersonal exchanges that could extend the concept of the working alliance. Even though these interpersonal areas were defined within the field of communications, at least the intimacy subscale of the RCS appeared related to the working alliance construct.

The strength of the relationship between the WAI-O and RCS-I merits further investigation to clarify what if any conceptualizations from the RCS could be used to explain the counseling process. Research could clarify the relationship between the full scale RCS (64 items) and various measures of the working alliance. These items could be subject to factor analyses to determine if the RSC does extend the conceptualization of
the working alliance, in particular in the area of interactions having a negative valance or concepts related to counseling that were defined by Burgoon and Hale (1984, 1987, 1999), such as effectiveness of assertiveness, confrontation style, expected versus actual communication behavior, overtones of relational conflict. Such investigations could include client and counselor perspectives of relational communications in addition to observers, all of which the RCS is suitable for.

Hypothesis 3. The third hypothesis was that there was no correlation between combined WAI-O and RCS-I scores and the Perceived Usefulness and Ease of Use scores Scale for the treatment and alternate treatment groups. There was a positive correlation between combined WAI-O and RCS-I scores and the Perceived Usefulness and Ease of Use scores Scale for the treatment and alternate treatment groups. The variability in the dependent variables accounted for by the Perceived Usefulness and Ease of Use Scale was .24, or 24%. This finding was important because there was a significant amount of variance from perceived e-mail usefulness and ease of use associated with the participants' perceptions of relationship development. In particular, perceptions about technology contributed to scores on the intimacy relational communication dependent variable. The finding was consistent with research by King and Xia (1999), who found that the ratings of perceived ease of use and usefulness for various forms of communication (e.g., electronic meeting system, individual and group face-to-face, telephone, voice mail, e-mail, fax) were significantly correlated to one's experience and perceived efficacy with the media. In other words, experience with technology may influence perceptions more than a rationally evaluated fit between a specific technology and task. Related to the current study, even if CMC was a choice for communicating
counseling, the perception of a medium could have influenced how appropriate CMC was evaluated to be by counselors. The implication for future researchers is that some measure of perception toward CMC is warranted when studying the CMC counseling relationship development between counselors and clients.

Certainly the correlational nature of the hypothesis precluded any inference about causality between perceived counseling relationship development and perceptions about how useful and easy it was to use e-mail. It is possible, however, to explore this relationship further. It seems worth exploring counselors' appraisals of technology and their judgment about counseling behavior conducted through CMC, however, specific thoughts on the topic are included in the future research directions section below.

**Hypothesis 4.** The fourth hypothesis was that there was no correlation between combined WAI-O and RCS-I scores and scores on the CTPS. The variable of counselor theoretical position did not account for a significant portion of the scores observed on the dependent variables. On the other hand, there was low power observed for detecting an effect if there was one. Regardless, there has been no research specifically on the topic, but it seems worthwhile to draw a distinction between the theoretical orientation of a clinician and what interventions the CMC medium can support.

**Discussion of Limitations of the Study**

There are methodological limits that were related to the post-test only design and to the analogue research method. These are discussed specific to the current study. Following design and method issues is a discussion about sampling.

If executed appropriately, a post-test only research design effectively controls for threats to internal validity. The current study controlled for maturation because there was
no time for participants to mature during the study. A post-test only design can control for history, however, the duration of the current study was over a 6 month period of time, which could have allowed for outside events to occur that could affect the study. To determine if the groups were affected equally by the passing of time, the dates of when forms were submitted were analyzed. The groups showed similar patterns of submissions with 17 to 13 submissions between September 2002 and December 2002 and 23 to 25 submissions from January 2003 to March 2003 respectively. Therefore, the groups were equally effected by outside events that could have influenced their scores.

Because there was no pretest involved, both statistical regression and testing effects were controlled. Similarly, the instruments were adequate in reliability. The full scale estimates were .97 for the WAI-O, .98 for the RCS-I, .92 for the Perceived Ease of Use and Usefulness Scale, and .85 for the CTPS. In the current study, there was control for a threat to validity due to instrumentation because all the scale alpha estimates exceeded .85.

Differential selection and selection-maturation interaction were also controlled for. Two approaches were used to determine whether between groups differences on the post-test were attributed to the treatment rather than extraneous variables. First, to ensure that the treatment and alternate treatment groups were equivalent, the participants were randomly assigned to either the treatment or the alternate treatment group. As such, any threats to validity would affect the treatment and alternate groups to an equal extent. Second, some demographic data were gathered from the treatment and alternate treatment groups that were later compared statistically to determine if there were differences
between the groups. In the current study there were no significant differences between the groups on the demographic variables measured in this study.

Similarly, to account for some within group variance, two covariate instruments were administered. According to Stevens (2002), in a study with random assignment to groups, the main purpose of covariance is to reduce error variance. Chance differences within a group can be adjusted for with covariance analyses, which in the current study was a MANCOVA. As such, the post-test means were adjusted to "what they would be if all groups started out equally on the covariate" (Stevens, 2002, p. 341). Likewise, precautions were taken to measure covariates prior to exposure to treatment to avoid interactions between the treatment and covariates. According to Stevens (2002) covariates measured after treatments are affected by the treatments, and part of the treatment effect can be removed when adjusting for the covariate.

Finally, there is the issue of experimental mortality that involves losing participants from experimental or control groups. In the current study there was evidence that three participants dropped out after completing the covariate measures. According to Gall et al. (1996), attrition threatens internal validity if it causes differential loss of participants across treatments. In the current study the attrition happened only for the alternate group. It was not clear what the reasons were for the drop out after completing the covariate instruments, but it was possible that the differential drop out rate inflated the outcome scores for the treatment group. Having addressed the post-test design, the analogue method is discussed next.

Analogue research is advantageous in gaining experimental control by eliminating extraneous variables, providing great precision, and allowing for random assignment to
conditions. On the other hand, it is problematic when it is unclear whether the research is investigating the actual counseling process, which can be compromised in exchange for experimental control (Heppner et al., 1992). As such, analogue research has disadvantages pertaining to the generalizability of the findings to real-life circumstances, or the external validity. There are a number of variables outlined by Heppner et al. (1992) as salient to the external validity of analogue research. These are discussed below along with what threats apply to the current study.

In general, there are some variables to consider when evaluating the external validity of analogue studies, all of which have various degrees of resemblance to real-life counseling. Some variables outlined by Heppner et al. (1992) included client variables, counselor variables, and process and setting variables. The different variables can be useful in determining the degree to which the study resembles real life counseling. These variables are discussed below as they apply to the external validity of the current study results.

Prior to conducting the study experts on online counseling rated the treatment scenario materials on the degree to which they realistically represented how in their experiences clients present themselves when seeking online support. There were six experts in the area of Internet counseling involved with the treatment scenario validation. The experts were instructed to read the treatment scenario, and answer a series of questions about whether or not they agreed that the treatment scenario demonstrated evidence of a working alliance and evidence of intimacy. They were also asked for suggestions that might make the scenario more like on-line counseling
Likewise, there were five expert clinicians who validated the content of the scenarios and who assessed whether the treatment and alternate scenarios differed on other dimensions besides the ones intended. The experts were told that the scenarios were two variations of a counselor and client dyad interaction, and they were instructed to read the scenarios with the dual purposes of doing a content analysis and a manipulation check. The expert clinicians were asked to indicate whether they agreed or disagreed with statements that were in bold text. The statements represented the constructs under study. Then, they were asked if the scenarios differed on any other dimensions besides the ones identified in bold text. Using inter-rater reliability, a 97% agreement was calculated. Therefore, based on all expert evaluations, the materials used were highly realistic and valid.

The current study, nonetheless, had some limitations on client dimensions according to the Heppner et al. (1992) standards. Even though the scenarios represent client expectation for change, client distress, and real-life problems seen in counseling, participants were involved with the expectation to learn about the topic of online counseling. Participants themselves were not under duress related to actual counseling, rather they were asked to perform an experimental task. Similarly, even though the scenarios represented some client selection of services and relevant and current concerns, the study participants were assigned to conditions and had no personal knowledge of the presenting problem. This is unlike actual counseling in which clients who are in distress seek help because they are unable to cope effectively to change from a state of duress to another state.
Also, prior to conducting the study, experts of online counseling rated the scenario materials on how realistically they represented the way counselors interact online. Based on their evaluations, the materials were inclusive of real counselor variables. For instance, in the current study the scenarios included the expectation that the client would change, representation of the counselor as having high status and credibility, and motivation of the counselor to be in a relationship that facilitates change. The counselor was represented as having professional knowledge and procedural skills. The participants in this study, however, were not conducting the counseling itself, rather judging these qualities in the scenarios. The study participants were also knowledgeable about procedural skills and counseling knowledge bases, experienced with what to expect in the counseling process, and able to judge counselor motivation and credibility. But, while the experimental materials resembled real-life counselors, the participants themselves were not part of the actual counseling process under study.

The experts of online counseling also rated the scenario materials on how realistically they represented client and counselor exchanges online. The scenario materials were not long enough to conduct a thorough assessment of client problems, but the specific intervention and duration of contact were determined to be representative of online counseling. In comparison with other research, the brevity of the exchange represents an extremely small sample of counseling interaction. There was an interpersonal exchange, and the client reacted to the relevant information processed in the exchange. Likewise, the limited client changes were related to the interactions. As with the client and counselor dimensions, however, there were some threats to generalizability related to the relationship exchanges. The study participants were not specifically
involved in the interpersonal exchanges, rather they viewed a scenario, which is relatively low in resemblance to them doing actual counseling. Participants were not involved in doing any assessment, they were not involved in client concerns directly, and they responded to client reactions hypothetically. In contrast, the online experimental environment was the treatment setting in which online counseling occurs. Therefore, the process dimensions were relatively low in representing actual counseling by participants, but the environment was highly representative.

Having addressed the design and method issues, the discussion below reflects limits related to sampling. The sample was of doctoral students in CACREP accredited programs. This excluded other counselor education doctoral students and doctoral students in other related professions. It is possible that this sub-sample was not representative of all counselors in graduate school or in practice. Generalization of findings were therefore limited to one specific group, and cannot be generalized to doctoral students in related professions (e.g., social workers, psychologists), those studying for a master's degree, or counselors in the field. Some faculty reported that some of their doctoral students started the study, but then stopped because of the time involved. It is possible that the doctoral students who responded do not reflect all doctoral students in CACREP accredited programs, which again limits the generalizability of the results to all doctoral students in CACREP programs.

Another limitation of the study was that there was only one scenario that represented one type of presenting problem and one kind of intervention. Therefore, results cannot be generalized to other presenting problems or alternate theoretical approaches to the counselor interventions. Likewise, the experimental conditions cannot
be generalized to counselors in the field. A final limitation is related to wording of the recruitment letter. The first sentence of the recruitment letter was "The field of counseling now faces ethical and legal dilemmas inherent in using the Internet within the practice of psychotherapy." It was possible that potential doctoral student participants had positive or negative biases toward the topic prior to reading the statement that biased the sample. Said another way, while the introductory statement may have appealed to some potential participants, others may have reacted with withdrawal, rejection, or disapproval given the controversial nature of the topic.

**Implications of the Findings**

The effectiveness of counseling has been researched in attempts to "identify the degree to which and manner in which the therapy process operates" (Sexton & Whiston, 1994, p. 6). The relationship quality between client and counselor has proven to be a large factor in client outcome (e.g., Garfield & Bergin, 1994; Gaston, 1990; Gelso & Hayes, 1998; Greenberg & Pinsof, 1986). It seems possible, based on the current findings, that it was not the CMC medium itself that defined whether or not a relationship having therapeutic qualities could develop. Though other research is needed, the current findings suggested that the CMC medium itself was not inherently impersonal by design or merely casual in quality. There were, however, positive perceptions about how useful and easy the medium was to use that correlated with relationship development when CMC was used for counseling. It remains unclear with whom, for what reasons, under what conditions, and in what manner text-based CMC counseling could be used. Likewise, there are ethical questions surrounding the use of text-based computer mediated counseling (e.g., DuMez, 2000; Hughes, 2000). Nevertheless, participants
seemed to think that written language could be adapted to facilitate a relationship with therapeutic qualities. What has traditionally been viewed as the social context of counseling may need to extend to include CMC as a social context that can support linguistic and psycholinguistics related to counseling.

With the current study's findings, there were implications for counselors in training and counselor educators, as well as clinicians in practice and counseling theorists. First, if more data accrue to support the text-based CMC medium, future counselors would need training experiences specific to the medium. In other words, if they are to use a text based CMC medium, they would need specific training on how to communicate effectively through text so as to develop a working alliance, or for that matter handle other aspects of the counseling relationship using text (e.g., transference). Counselors would need to learn how to modify their textual behavior to facilitate client change to his or her desired outcome. This also implies that counselors would need to learn the mechanisms for change through text, as well as how to conceptualize the change process using CMC.

Currently, in the field there is a gap between National Board for Certified Counselors ethical standards and actual practices of WebCounseling (Heinlen, Reynolds Welfel, Richmond, & Rak, 2003). It seems important for counselor educators to keep doctoral students apprised of ongoing research developments and to infuse current research findings into the existing curricula. For example, the discussion of asynchronous, text-based CMC for counseling could be described, defined, and discussed in counselor education courses. Such discussion would have to include possible advantages and disadvantages of the medium, as well as some discussion about a CMC
medium as it deviates from traditional training. In their summarization of trends in
cybercounseling, Walz and Bloom (2000) pointed out that counselors need to think
outside the box, and be able to use existing resources rather than apply traditional
thinking to nontraditional problems. Likewise, it is not the modality, but the process and
intervention that count in reaching clients' desired outcomes (Walz & Bloom, 2000). It
seems reasonable for counselor educators to discuss that there are emerging paradigms
that will challenge students' traditional training once they are in practice.

As counselor educators and supervisors, there are implications for supervisory
relationship development using a CMC form of communicating. It has been documented
that communication styles impact the supervisory working alliance (e.g., Ladany,
Walker, & Melincoff, 2001), and that the supervisory working alliance includes an
interpersonal communication exchange (e.g., Chen & Berstein, 2000). If a working
alliance and relational communications of intimacy can be communicated between a
client and counselor dyad through a CMC medium, there is the possibility that a
supervisory working alliance and relational communications could be developed between
a counselor and clinical supervisor as well.

There are implications for practicing counselors regarding the topics suitable for
counseling. Currently, there is evidence that some aspects of career planning and
assessment occurs online (e.g., Reile & Harris-Bowlsbey, 2000) and that some career
information used in career decision making is possible to communicate in an Internet
environment (e.g., Refvem, Plante, & Osborne, 2000). Likewise, there are Internet
resources for general information that are intended for consumer information about
clinical services, courses of treatment, or specific psychological problems (e.g., Palmiter
& Renjilian, 2003). By contrast, the current study had a personal problem as the presenting issue of counseling. The implication is that a client can communicate intimate problems (e.g., relationship problems), which suggests that personal counseling topics are suitable through CMC. Other interpersonal topics might be suitable as well.

Another practitioner implication goes beyond using the Internet for information, however, to CMC supporting the counseling process. There was some evidence in the current research that the beginnings of a counseling process developed in CMC, and the quality of the exchanges were perceived as intimate. The implication is that the CMC medium can support a therapeutic quality level of communication that is used in the counseling process. This implication is consistent with anecdotal research that supports the use of e-mail (e.g., Murphy & Mitchell, 1998) for personal problems.

A final implication from the study relates to counseling theory. The current study used the interactive journal approach as a theoretical guide. There was the perception by treatment group participants that there was a working alliance, and this implied that as part of the treatment scenario, an activity using the interactive journal theory was amenable to the text-based medium. In theory, other activities from the interactive journal framework could also be effective in a text-based medium as pointed out by Childress (1999). It is unclear how much the theory applies to other text-based synchronous (e.g., text chat room) or asynchronous (e.g., bulletin boards) CMC mediums, or to sensory rich CMC (e.g., audio visual conference) or fantasy-based multimedia CMC (e.g., MOOS, MUDS). It is not clear what aspects of existing face-to-face counseling variables such as empathy can be communicated through text-based CMC, or how to communicate such sentiments effectively, although in the current study the treatment group participants
perceived of intimacy and a working alliance, which has a bond scale that shares variance with empathy (Gelso & Hayes, 1998). While the results of this study have implications for counselor educators, counselors in training, clinicians in practice, and theorists, there remain many questions that are not yet answered but that need more investigation.

Future Research Directions

The questions yet to be answered are presented below specific to counseling relationship development, impression formation, and conditions of CMC use. Related theories are discussed throughout that could help inform future researchers.

Theoretically, the working alliance exists for collaboration about counseling work, and it accounts for variance measured in client therapy outcomes (Gelso & Carter, 1994; Horvath & Greenberg, 1989). Even though the working alliance can be communicated through asynchronous, text-based CMC, are other aspects of the counseling relationship able to be communicated? How do the counseling relationship variables observed for face-to-face therapy (e.g., transference, countertransference, real relationship) manifest themselves in a CMC forum? How do counselors and clients modify their textual behavior to relate for therapeutic reasons? The working alliance is not a mechanism for change, but rather a foundation. But what are the mechanisms for change when counseling is conducted through CMC? How much do change variables of face-to-face counseling theory apply to CMC mediated counseling? Likewise, what other variables account for client change in CMC? How useful are theories in the field of communication in helping to explain client change in face-to-face environment?

Within a CMC medium, the mechanisms for change may also be related to the perception about technology held by counselors and clients. In the current research,
perceptions about technology contributed to scores on the intimacy relational communication dependent variable. It is possible for future research to explore this relationship further. If such research is conducted, it could involve different measures of the constructs that reflect other types of CMC (e.g., virtual reality, videoconference) and the perceptions of counselors toward the different technologies. Whether or not there is a causal relationship between counselors' appraisals of technology and their judgement about counseling behavior through CMC seems worth exploring. For instance, how much would a positive perception about technology contribute to a working alliance or to counseling outcome? How is the influence of counselors' perceptions toward technology similar or dissimilar to clients' perceptions? Do perceptions change over time given counselors' technological experiences or training?

As stated above, there is a need for research that can address what interventions are effective when using CMC, but in the current study it did not appear that participants' perceptions about counseling relationship development through CMC were influenced by what their beliefs about counseling practice. The question of which variables lead to counseling effectiveness is a complex one that has yet to be answered fully in traditional counseling. It is not surprising that the same question is unanswered for CMC counseling. In addition, there are some theories in the field of communication that could inform the understanding of how people relate in a CMC context. In what ways can theory in communications inform CMC counselors in developing a conceptualization of the CMC change process?

Future research could also determine how the relationship changes over time when counseling is conducted through CMC and whether the pattern of working alliance
online has distinct stages similar to face-to-face counseling relationship development (e.g., Tracey & Ray, 1984) or related to childhood emotional bonds (e.g., Mallinckrodt, 1991). There is also the possibility of researching the effectiveness of asynchronous, text-based CMC for individual or group counseling compared to face-to-face counseling through a field based study. Such research could investigate the quality of CMC counseling as well as the timeframe needed for change to occur.

As pointed out by Childress (1999) and Murphy and Mitchell (1998), there are rudimentary theoretical guides to counseling online, and such theories might allow a glimpse into how the writing process is distinct from face-to-face interpersonal exchanges, or perhaps complementary and augmentative to face-to-face counseling. There might be other theories of bibliotherapy that can explain the change process through writing, although the phenomena of text-based online counseling would differ conceptually in some ways from bibliotherapy (e.g., the presence of a computer, interactive nature of CMC text when communicating with others). In other words, online counseling theory needs to take not only the writing aspects of text-based CMC, but also the uniqueness of the medium and the process of online communications into account as theory develops to guide counselors. Such theory would have to consider the types of CMC (e.g., text-based chat rooms, virtual reality, asynchronous text, videoconferencing).

As such, in trying to understand the change process, it makes sense to consider theory and research on the CMC medium from the field of communications.

In the field of communications, there are ideas about how people relate online. The current research used relational communication because it was a researched and operationalized theory that was used previously for online CMC research. There are,
however, additional theories being researched in communications that could guide future online counseling process research, for example, social information processing theory and presence theory. These are described briefly below followed by suggestions of how these could influence online counseling research.

Social information processing theory was described by Walther (1992) as a way to understand how CMC relationships develop in text-based CMC such as e-mail, bulletin boards, and chat systems. In particular, Walther (1992, 1996) theorized that although written text does not support nonverbal cues typical of face-to-face exchanges, CMC users accomplish interpersonal functions and form impressions of one another. In theory, what differed between face-to-face interaction and CMC was the allotment of time to form impressions and relationships. Additionally, social information processing theory of CMC assumes that without nonverbal cues, communicators adapt their textual behavior (e.g., content and linguistic strategy, typographic cues) for social purposes. The theory has been supported through studies on the nature of CMC as compared to face-to-face interaction. Specifically, studies have included investigations into presence of photographs, salient identities, and assessment of partner relational communication and attractiveness (e.g., Walther, 1997, as cited in Tidwell & Walther, 2002; Walther, Slovacek, & Tidwell, 2001, as cited in Tidwell & Walther, 2002). Likewise, there is research that suggests that CMC versus face-to-face partners form selective impressions in task focused communication that has greater depth (i.e., selective but exaggerated impressions) (Hancock & Dunham, 2002, as cited in Tidwell & Walther, 2002). These findings support the theory put forth by Walther (1992), and research by Tidwell and Walther (2002) addresses CMC behavioral strategies, which included the specific
processes that people used to form impressions and reduce social uncertainty. Tidwell and Walther (2002) studied the way interpersonal process forms on a microlevel, and they looked at how people form acquaintances, process attributes, and ways of relating in a CMC environment.

In addition, Walther (1992) has some thought provoking ideas that may serve as a foundation for how transference may happen with online counseling. In an effort to reduce uncertainty, he theorized that a "hyper relationship" develops. Though not conceptualized for counseling there are concepts worth reviewing should this line of research develop. For instance, Walther (1996) wrote about how people form perceptions of communication partners that are optimized or inflated. In other words, communicators in a text-based CMC are prone to form constructions of the other that are selective in self-presentation and idealized because of minimal cues. The ideas of interpersonal magnification and intensification coupled with notions about constructed idealized images (Walther, 1992) seem salient to counseling theory about counseling relationship development. Therefore, as counselors seek to understand how text-based online counseling works, it would be important to consider the social information processing theory and related research.

A second related theory from the field of communication involves research related to the idea of social presence. According to Lombard and Ditton (1997), social presence can be described as "the extent to which a medium is perceived as sociable, warm, sensitive, personal or intimate when it is used to interact with other people" (Concept explication section, ¶ 2). Although applied in non-counseling settings, the ideas associated with social presence include how language choice creates psychological
closeness and behavior used to establish intimacy, as well as the effects of paralanguage and nonverbal behavior on perceptions of closeness. Likewise, Lombard and Ditton (1997) described how presence is also conceptualized as "the degree to which a medium can produce seemingly accurate representations of objects, events, and people - representations that look, sound, and/or feel like the 'real' thing" (Concept explication section, ¶ 5). This includes social realism, or how true to life a mediated environment is perceived. There is additionally an idea that presence involves transportation, where the user is transported to another place, a place or object is transported to the user, or where two or more people are transported to a shared place (Lombard & Ditton, 1997). Such phenomena are studied specific to television, virtual reality, or virtual tours, although the potential for text-based shared space is also possible. Research on social realism also extends to video conferencing and chat rooms where participants are asked about how much virtual space feels like a face-to-face exchange.

Presence is also conceptualized as psychological and perceptual immersion, which can be accomplished by submerging perceptions in a virtual reality world (e.g., eyes covered by head mounted display). The immersion concept also includes psychological states of engagement or involvement, which are concepts salient to counseling albeit to a different end than the mass communications of television and movies or the advancement of video games. What is salient about the theory is that people perceive computers as being capable of gratifying interpersonal needs, and they perceived the Internet as warm and social (e.g., Papacharissi & Rubin, 2000). There is research on the different dimensions of presence, including a peer reviewed journal entitled Presence, that can inform the conceptualization of online counseling research.
Another area to be explored is related to impression development, which is related to the social information processing theory described above. Factors that could be introduced into experiments include counselor or client attractiveness (e.g., through computer mediated photographs or attachments) or multicultural factors (e.g., race of counselor or client). Studies about impression development online in counseling could be conducted similar to studies already represented in the literature within communications (e.g., Walther, 1993). These studies are conceptually similar to face-to-face counseling research on impression development. What counseling related communications can be mediated through a computer? How do clients and counselors form impressions about one another?

Methodologically, process research has included typed scripts of interviews, sometimes followed by the analysis of written words. Such research is concerned with messages and states of the sender and receiver. Transcription in this type of research can be a weakness of some process designs because it then focuses only on speech when many channels of communication are being used. This is not an issue for CMC mediums that are text-based. Typed text becomes the actual counseling, which is amenable to how process research is sometimes conducted. What can process researchers learn about the change process by studying CMC? Can communication basics such as syntax, semantics, pragmatics, linguistics, and paralanguage that are related to counseling be better understood using a text-based medium? How are some counseling-related communications declared through textual behavior? The asynchronous, text-based nature of some CMC could likewise extend the type of external effects currently studied, which are separate from within session behaviors that have been typically studied. With
asynchronous, text-based CMC, there is the potential for studying some external effects that are not observable during a face-to-face exchange. For example, how do clients write, revise, or re-write their messages before they submit the actual message to a counselor? This sort of data could more closely reflect the cognitive and emotional process that is experienced by a client. With the ability to track changes available in software, there could be research that tracks or captures some of the process. On a related note, it seems reasonable to expect that the writing process is different from a face-to-face exchange. How is it different? How is CMC different from other types of bibliotherapy? For whom might the medium be effective?

Given a furthering of the theoretical basis for online counseling, there is additional research that could be done to further clarify the current study's results, which were described above. If other controlled experiments were conducted, it would be important to use other theoretical approaches underpinning the online exchanges. How do the different approaches effect client change? Are the different approaches comparable? The effectiveness of the CMC counseling approach to different client problems also needs further investigation. Currently, the type of text-based CMC interventions that are effective with specific client problems is unknown. How suitable is an asynchronous, text-based CMC counseling exchange for specific client problems? With whom would it be contraindicated? For what reasons and under what conditions would text-based CMC be effective? Experimentally, other scenarios with different presenting problems and alternate theoretical approaches to the counselor interventions could be studied. The experimental nature of the current study does not generalize to situations in the field, so having real client interactions rated by client, counselors, and observers could be
informative. In that situation, would the client, counselor, and observer perspectives differ?

The current study included one brief scenario, but an experiment with more than one scenario could make the results more representative of client presenting problems, the depth of the client and counselor relationships, and the length of exchanges. Ideally, the material for future research would come from actual client and counselor exchanges rather than a composite of clients who counselors have worked with. Likewise, it makes sense to have the relationship that observers read occur more like the natural context of e-mail as opposed to an entire exchange read in one sitting (e.g., sporadic exchange that goes directly to participant e-mail). It might yield a different perspective if the timeframe for reading the e-mail exchanges varied. Moreover, it would be important to investigate the working alliance from the perspective of the client and counselor. Beyond controlled experiments, the findings under laboratory conditions would need to be tested in the context to which findings are meant to generalize. In other words, it would be informative to have actual counselors and clients interact to understand the process.

Finally, there are various CMC mediums that need clarification about their effectiveness. For example, how are synchronous and asynchronous text systems being used for counseling? Within a text-based system, there are different forms of communication. Are bulletin boards, e-mail, and chat rooms comparable? How do text-based systems compare to video or face-to-face exchanges?

As such there are numerous questions that can be generated from the existing study. Some research could be done in the area of process research and the area of online
counseling effectiveness, as well as in the area of impression development or to extend concepts from the field of communications.

In summary, the discussion of the current study included the statement of the problem and research questions that lead to recruiting participants from CACREP accredited doctoral programs that were asked to read one of two web-based scenarios. The treatment group scenario contained text with a working alliance and intimacy communicated between a counselor and client dyad; the alternate treatment group read a scenario absent of a working alliance and intimate relational communications. The interpretation of the results included four main implications of the findings. First, advanced level clinicians indicated that they perceived of a counseling relationship having therapeutic qualities when client and counselor interactions were text-based and computer mediated. Second, the data indicated that there was a significant relationship between the dependent variables, which implied that the WAI-O and RCS-I appeared to share a construct. Third, there was a significant amount of variance that perceived e-mail usefulness and ease of use had on the participants' perceptions of relationship development. In particular, perceptions about technology contributed to scores on the relational communications of intimacy. Fourth, participants' personal approaches to counseling did not account for a significant portion of the scores observed on the dependent variables. Each of the implications was related to existing literature before discussing the limitations of the study. The limitations specific to the post test research design, analogue counseling research method, and low response rate were discussed as they related to the study. Following the limitation section was a discussion about the future research directions, which included the counseling relationship development in
CMC, impression formation with CMC counseling, and conditions of CMC use for counseling. Related theories in the field of communication were also discussed with future research ideas for CMC counseling research because considering the theories from both fields seemed like a logical end.
References


Appendix A

Recruitment Letter
March 15, 2002

Dear (faculty member name),

I am writing to request your assistance in recruiting doctoral students in your counseling training program to participate in a national study being conducted by Lynn Atanasoff, a doctoral candidate at The Pennsylvania State University. The study is designed to investigate the quality of therapeutic relationship development when therapy occurs on-line.

If you agree to help, please distribute the recruitment letter included below by e-mail to all doctoral students enrolled in your program. I will also forward a reminder e-mail to distribute to the same students in one week. Please reply to my e-mails, even without a message, to communicate to me that you have forwarded the request and reminder.

Thank you in advance for your assistance with this research,

Lynn Atanasoff, M.S.
Dear Colleague,

The field of counseling now faces ethical and legal dilemmas inherent in using the Internet within the practice of psychotherapy. We are writing to encourage you to participate in a national study being conducted by Lynn Atanasoff, a doctoral candidate at The Pennsylvania State University. The study is designed to investigate the quality of therapeutic relationship development when therapy occurs on-line. We are particularly interested in your take on the topic because with your advanced clinical training, you are in a position to judge the quality of therapeutic exchanges. This is also an opportunity to gain some exposure to on-line work currently practiced by hundreds of counselors in the field, as well as help another graduate student's research, a good deed you will inevitably ask from others in conducting your own research.

We urge you to take approximately 40 minutes of your time to participate in this study. To begin click on the following web page at (https://www.work.psu.edu/projects/lma100/). The analysis will consist of group data only, and your responses will be kept in strict confidence. Although your answers can be submitted easily on-line, the data will be transferred using secure methods to a secure server. For ease, all of the study materials are available online so you can participate at a time most convenient for you.

Should you decide to participate, please know that after you submit your responses to some questionnaires, a cookie will be sent to your computer. The cookie is meant to prevent your answers from being submitted more than once, an accident that can happen with online research. We would ask that if your web browser is set to reject cookies that you temporarily change your preference to avoid this potential problem.
If you have concerns or questions regarding this study contact Lynn Atanasoff, MS, 319 CEDAR Building, Department of Counselor Education, Counseling Psychology, and Rehabilitation Services, The Pennsylvania State University, University Park, PA 16802. Lynn's e-mail address is lma100@psu.edu and a phone number where she may be reached is (814) 863-2402. Brandon Hunt, PhD, Lynn's academic advisor, can be reached at bbh2@psu.edu or (814) 863-2408.

Thank you for your assistance in advancing the field through this national study.

I will be pleased to send you a summary of the results if you desire.

Sincerely,

Lynn Atanasoff, MS
Doctoral Candidate
Department of Counselor Education, Counseling Psychology, and Rehabilitation Services

Brandon Hunt, Ph.D., LPC, NCC, CRC
Associate Professor
Department of Counselor Education, Counseling Psychology, and Rehabilitation Services
Explanation of Study and Consent Form (IRB # 02B0075)

We would like you to participate in a research study about therapeutic relationship development when counseling occurs using the Internet. We are asking for your participation because you are an advanced level clinician with the knowledge and experience to make clinical judgements relevant to the study.

Purpose of the Study

The purpose of the study is to examine the level of interpersonal exchanges and the development of a working alliance when counseling occurs in a text-based, on-line medium.

Procedures

We will first ask you to provide general information about your age, sex, race, and clinical experience. We will then ask you to read a counseling exchange that is posted on the World Wide Web followed by a variety of questions concerning the exchange you read with respect to relationship development, level of interpersonal communications, your assumptions as a therapist, and your feelings toward technology.

Time Requirements

The scenario and questions will take approximately 40 minutes to complete.

Potential Risks

The procedures described above are thought to involve minimal risks to research participants. Although it is possible that you might experience some dissonance by reading the scenario and answering questions, the risks are not thought to be greater than those encountered in everyday life.

Benefits
No direct physical, health, psychological, or social benefits are expected to result from participating in this study. The results, however, will improve our understanding about issues related to the practice of on-line counseling.

Confidentiality

All data will remain anonymous. Given that you will not be required to place your name on the data, not even the principle investigator will have a way to trace the data to participants involved. In addition, you will not be asked to sign a consent form, which means there will be no permanent record of your participation in the study. All records associated with your participation in the study will be subject to the usual confidentiality standards applicable to medical records (e.g., such as records maintained by physicians, hospitals).

All data collected from participants will be transmitted in an encrypted format to reduce the risk that any data intercepted during transmission can be decoded and that individual responses can be traced to an individual respondent. To ensure encryption, we recommend that you use one of the following browsers: (a) Internet Explorer, (b) Netscape Navigator, (c) Opera, or (d) NCSA Mosaic. Although data will be encrypted and sent through a secure server, confidentiality of data sent through the Internet cannot be guaranteed.

The encrypted data that are submitted will be routed to a secure server managed through the Center for Academic Computing at The Pennsylvania State University, which requires a password to access.

Financial Compensation

There is no financial compensation for participating in this study.
Withdrawal for the Study

You may withdraw your consent and terminate your participation in the study without penalty, and you may choose not to answer specific questions. You are also not required to provide personal items of information if you do not feel comfortable in doing so.

Contact Person

If you have concerns or questions regarding this study contact Lynn Atanasoff, MS, 319 CEDAR Building, Department of Counselor Education, Counseling Psychology, and Rehabilitation Services, The Pennsylvania State University, University Park, PA 16802. Lynn's e-mail address is lma100@psu.edu and a phone number where she may be reached is (814) 863-2402. Brandon Hunt, PhD, Lynn's academic advisor, can be reached at bbh2@psu.edu, or (814) 863-2408.

Consent

The investigation and my part in the investigation have been defined and fully explained to me by reading this consent form, and I understand the explanation. I understand the procedure and possible risks. I understand from reading this consent form how to contact the researchers to ask questions I might have. I understand that my participation is voluntary, and I am 18 years of age or older.

By submitting the on-line forms I am aware I am providing my consent to participate. In the event of any publication resulting from the research no personally identifiable information will be disclosed.
Appendix B

Demographic Information
PERSONAL INFORMATION

1. Age:

2. Race:
   - European American   African American
   - Asian American      Native American
   - Latino/ Latina      Other

3. Sex: □ male □ female

4. Years of clinical experience:

5. State where you go to school:

6. Type of school you attend:
   - □ Private □ Public

7. Years of e-mail use:

8. Years of WWW use:

9. How many people are around as you complete this instrument?

10. What, if any, distractions are in the environment where you are completing this (e.g., background noises)?
Appendix C

Working Alliance Inventory
WORKING ALLIANCE INVENTORY

Below are 36 questions about the client and counselor relationship that you just read. Using the following scale rate the degree to which you agree with each statement, and select your answer to the right of the item.

<table>
<thead>
<tr>
<th></th>
<th>Not at all true</th>
<th>A little true</th>
<th>Slightly true</th>
<th>Somewhat true</th>
<th>Moderately true</th>
<th>Considerably true</th>
<th>Very true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The client and counselor feel uncomfortable with each other.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2. The client and counselor agree about the things they will need to do in therapy to help improve the client’s situation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3. The client and counselor are worried about the outcome of these sessions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4. What the client and counselor are doing in therapy gives the client new ways of looking at her/his problem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5. The client and counselor understand each other.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>6. The counselor perceives accurately what the client’s goals are.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>7. The client finds what they are doing in therapy confusing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>8. I believe the client likes the counselor.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>9. I sense the need for the counselor to clarify the purpose of their sessions to the client.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>10. The client and counselor disagree with each other about what the client ought to get out of therapy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>11. I believe the time the client and counselor are spending together is not spent efficiently.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>12. The client does not understand what the counselor is trying to accomplish in therapy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>13. The counselor is clear on what the client’s responsibilities are in therapy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. The goals of these sessions are important to the client.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I find what the client and counselor are doing in therapy is unrelated to the client’s concerns.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I feel that the things the client and counselor do in therapy will help the client accomplish the changes that s/he wants.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. I believe the counselor is genuinely concerned for the client’s welfare.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. The counselor is clear as to what s/he wants the client to do in these sessions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. The client and counselor respect each other.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>20. I feel that the counselor is not totally honest about his/her feelings toward the client.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>21. The counselor is confident in her/his ability to help the client.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>22. The client and counselor are working towards mutually agreed upon goals.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>23. I feel that the counselor appreciates the client.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>24. The client and counselor agree on what is important for the client to work on.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>25. As a result of these sessions the client is clearer as to how s/he might be able to change.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>26. The client and counselor trust one another.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>27</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>28</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>29</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>30</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>31</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>32</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>33</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The client and counselor have different ideas on what the problems are.

The client's relationship with the counselor is very important to her/him.

The client has the feeling that if s/he says or does the wrong things, the counselor will stop working with her/him.

The client and counselor collaborate on setting goals for the client's therapy.

The client is frustrated by the things the counselor is asking her/him to do in therapy.

The client and counselor have established a good understanding of the kind of changes that would be good for the client.

The things that the counselor is asking the client to do don't make sense to the client.
<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>34. The client doesn’t know what to expect as the result of therapy.</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. The client believes that the way the client and counselor are working with her/his problem is correct.</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. The client feels cared about even when s/he does things that the counselor does not approve of.</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D

Relational Communication Scale - Intimacy
Following are a number of statements about the interchange you just observed. For each, I would like you to use a 1 to 7 scale to indicate whether you agree with the statement or not. Please circle 1, 2, 3, 4, 5, 6 or 7 depending on your opinion. A 7 means you strongly agree, a 6 means you agree, a 5 means you agree somewhat, a 4 means you are neutral or unsure, a 3 means you disagree somewhat, a 2 means you disagree, and a 1 means you strongly disagree.

The Client and Counselor:

<table>
<thead>
<tr>
<th>Statement</th>
<th>strongly disagree</th>
<th>disagree</th>
<th>disagree somewhat</th>
<th>neutral or unsure</th>
<th>agree somewhat</th>
<th>agree</th>
<th>strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Involvement subscale]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. were highly involved in the conversation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2. showed enthusiasm while talking with each other.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>*3. were not fully engaged in the conversation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>*4. acted bored by the conversation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5. were interested in what each other had to say.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>*6. created a sense of distance between them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>*7. were detached during the conversation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

### [Affection subscale]

| 1. acted like they were enjoying the conversation. | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 2. displayed pleasantness toward each other.     | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| *3. seemed to dislike each other.                | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| *4. communicated coldness rather than warmth.   | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 5. conveyed that they found each other attractive to be with. | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 6. showed affection toward each other.          | 1   | 2   | 3   | 4   | 5   | 6   | 7   |

### [Receptivity/Trust] subscale

| *1. were unreceptive to what each other had to say. | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 2. tried to win each other's trust.               | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
| 3. were open to each other's ideas.               | 1   | 2   | 3   | 4   | 5   | 6   | 7   |
4. appeared honest and truthful when communicating with each other.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

5. were unwilling to listen to each other.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

6. were sincere in communicating with each other.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

7. didn't care what each other thought.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

8. tried to establish rapport with each other.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

[Depth subscale]

1. tried to move the conversation to a deeper level.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

2. showed no desire for further interaction with each other.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

3. created an air of familiarity between them.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

4. tried to create a more personal relationship with each other.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

5. kept the conversation at an impersonal level.  

<p>|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>acted like they were good friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>made the conversation seem superficial.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[Similarity/Inclusion subscale]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>made each other feel they were similar.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>tried to establish common ground with each other.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>made differences between them evident.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>made each other feel like they didn't have a lot in common.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>acted like they were more powerful than each other.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>treated each other like an equal.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Scoring Key: Items with an asterisk should be reverse-scored (i.e., 7 = 1, 6 = 2, 5 = 3, 3 = 5, 2 = 6, 1 = 7). Add together all the items belonging to a given dimension or composite (e.g., involvement/affection), then divide by number of items. Global intimacy/similarity includes the first five sets of items. Higher scores represent greater intimacy.
Appendix E

Perceived Usefulness and Ease of Use Scale
PERCEIVED USEFULNESS AND EASE OF USE SCALE

Below are 12 questions about electronic mail. Using the following scale to rate the degree to which you agree with each statement, and select your answer to the right of the item.

<table>
<thead>
<tr>
<th>Question</th>
<th>Extremely likely</th>
<th>Quite likely</th>
<th>Slightly likely</th>
<th>Neither likely nor unlikely</th>
<th>Slightly unlikely</th>
<th>Quite unlikely</th>
<th>Extremely unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Using e-mail in my job enables me to accomplish tasks more quickly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2. My interaction with e-mail is clear and understandable.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3. Using e-mail improves my job performance.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>4. Learning to operate e-mail is easy for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>5. Using e-mail in my job increases my productivity.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>6. Using e-mail enhances my effectiveness on the job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>7. Using e-mail makes it easier to do my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>8. I find e-mail useful in my job.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>9. It was easy for me to become skillful at using e-mail.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>10. I find it easy to get e-mail to do what I want it to do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>11. I find e-mail to be flexible to interact with.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>12. I find e-mail easy to use.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
Appendix F

Counselor Theoretical Position Scale
COUNSELOR THEORETICAL POSITION SCALE (CTPS)

The following statements represent a range of theoretical and procedural views expressed by counselors and therapists.

Please indicate the extent of your agreement or disagreement with each statement, by selecting the space to the right of the item.

<table>
<thead>
<tr>
<th>Statement</th>
<th>completely disagree</th>
<th>moderately disagree</th>
<th>somewhat disagree</th>
<th>equally agree and disagree</th>
<th>somewhat agree</th>
<th>moderately agree</th>
<th>completely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unconscious motives and intuitive processes should be considered essential aspects of psychological theory</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>2. Unconscious motivation is a very important aspect of human behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>3. The emotional process in counseling or psychotherapy is a vital agent of change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>4. Interpretation of symbolic meaning enables illumination of the depth of human experience</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>5. The concept of unconscious processes is of limited therapeutic value</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>6. I generally prefer to practice a goal-directed approach to counseling or psychotherapy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>7. Understanding of a client's childhood is crucial to therapeutic change</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>8. Counseling or psychotherapy should focus on &quot;here-and-now&quot; experiences:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>There is no need to focus on the client's past</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>9. Human beings need to know meanings rather than simply factual information</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>10. It is essential to focus on feeling and meaning as communicated by a client</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>11. People can learn effective coping skills without necessarily having to go into the depths of their private experience</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>12. Introspective and intuitive methods in counseling or psychotherapy are more useful than explanations which do not go beyond observable behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>13. Self-knowledge deepens our understanding of life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>14. An effective counselor or psychotherapist demonstrates sensitivity and personal involvement towards the client</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>15. Careful re-examination by a client of his/her personal history can alter the client's present emotional life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>16. It is important for a counselor or psychotherapist to feel strong personal and emotional involvement with a client</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>17. Search for meaning and wholeness in life is the essence of human existence</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>18. Establishing a client's awareness of his/her emotions and desires is a beneficial therapeutic outcome in itself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>19. I believe that counseling or psychotherapy is much more an art than a science</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>20. As a counselor/psychotherapist I usually take an active role in structuring the interview</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>21. Emotional stability is a product of one's logical and consistent thinking behavior</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>22. Cognition is the most powerful factor in determining experience</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>23. An understanding of the reasons for one's behavior is crucial to behavioral change</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Knowledge is valid only if it is based in logic and/or reason</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Irrationality is the fundamental cause of psychological dysfunction</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Clients need to be guided and given information in order to achieve their therapeutic goals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Improving the client's level of social adjustment ought to be the main therapeutic aim</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>As a counselor/ psychotherapist I maintain a detached and objective approach during counseling or psychotherapy interviews</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Statement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>29. It is unwise for a counselor or psychotherapist to respond to a client</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>in a spontaneous, not thought through manner</td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Any claimed mental process can be translated into a statement describing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>observable behavior</td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Valid information comes only from empirical research</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Nothing is true if it is illogical</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. The brain is the prime mover in human social development</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Logical analysis and synthesis of information is crucial to one's survival</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>35. Emotional involvement by a therapist defeats the purpose of therapy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>36. Intense negative emotions are manifestations of unrealistic and non-logical cognitions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>37. It is preferable that a counselor/psychotherapist remains personally uninvolved in the therapeutic relationship</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>38. Specific training in counseling or psychotherapy techniques is vital to the therapeutic outcome</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>39. Perceptions define human experience</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
40. Higher intellectual processes over-ride more primitive functions of feeling and behavior

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
Appendix G

Treatment and Alternate Treatment Interaction Scenarios
TREATMENT INTERACTION SCENARIO

CLIENT
My name is Chris and I am 24. I can't believe I'm doing this, but I'm having problems with my boyfriend, and I need HELP. I've thought about talking to a counselor, but I haven't gotten to it, plus I don't have time to make an hour appointment.

Anyway, I live with my boyfriend and my 7 year-old son and 5 year-old daughter. Tom moved-in 4 years ago after my divorce, but we argue about small stuff and say things that both of us regret later. It's not like we have fistfights, but there's a lot of yelling. I'm disgusted with him right now.

What happens is that we don't talk for a while and then tread lightly for a few days. Sooner or later something else happens, and it starts all over. Eventually we go back to getting along, but then more of the same.

I end up wondering if it's worth it, but then I think that we argue less than we get along, but then there are times when I wonder if I could marry Tom. We've talked about it, but I know I've been keeping my options open and flirting at work.

It's wrong to have my kids see us fight. After I divorced their father, Tom moved in, & he's very good to my children. Most days I think that we could be a family, but he pushes my buttons and says stuff like "I'm not your ex-husband".

Tom said that after we fought yesterday he found Mark crying and when I asked him later if he was sad, and he said yes but didn't know why. Of course Tom said I could at least think about Mark when I start yelling - I love my kids, and HE'S A F*@#ING JERK TO SAY THAT I DON'T CARE ABOUT MY CHILD!!!! WHO THE HELL IS HE TO TALK ABOUT YELLING!? He is sooo MEAN to me sometimes - he's said other things like that before
I just don't know what to do about Tom and having my kids hear us fight. Can you help me with my relationship with Tom before we end up like my parents?

COUNSELOR:

Chris,

I want to respond to what you wrote, but before I do, I want to tell you that my name is Madison Smith. I'm 45, and have worked in counseling for 17 years and counseling by e-mail for the past 3 years. I could say more, but since you asked if I could help, I want to say a couple of things about doing counseling on-line.

I know that you already returned the waiver you found online that acknowledges the possibility of unauthorized 3rd party interception despite both our efforts to send secure transmissions. From my end, know that your e-mail, consent form, and personal information form arrived encrypted, as you intended, and I will encrypt my replies like I did today. I keep e-mails encrypted, and I'm the only one with a password to my computer. May I suggest that you keep messages we exchange secure on your computer as well, especially if you share your computer with anyone who might be mentioned in your e-mails

Now, to get to what you wrote,
You said that you need help with your boyfriend - I can tell that you were very upset with Tom when you wrote the e-mail you sent. But, Chris, I get the sense that both you and Tom have some role in the struggles you have as a couple. What makes me think this is your statement

>but we argue about small stuff and say things that both of us
>regret later. It's not like we have fistfights, but there's a
>lot of yelling

It strikes me that you and Tom are both feeling some pain, and since I can only offer you some help, we'll have to figure out where else you might need support as a couple or family, so let's talk about the role of outside resources - my thought is that you and Tom possibly need to meet with a couple's counselor in-person to work on communicating. What made me think of this option was:

>What happens is that we don't talk for a while and then tread lightly for a few days. Sooner or later something else happens, and it starts all over. Eventually we go back to getting along,
>but then more builds-up.

I’m concerned that you get the help you need quickly. This is done most quickly and efficiently in face-to-face counseling, where the therapist can listen to your communication and help both of you understand, in the moment that it’s occurring, the nature of your communication processes. An in-person therapist can also help you both learn more effective ways of talking to each other and resolving differences. Arguments will happen. The important thing is developing the positive communication skills that will let you effectively resolve arguments without becoming hurtful or destructive.

You mentioned your parents, which is insightful of you, because many of our communication patterns are reflections of what we learned in childhood, from watching our parents, but these patterns can be changed. The first step toward change is understanding what we are doing. An in-person therapist can listen to your communication happen in the moment and help you and Tom understand the patterns each of you brings to the relationship, and how to develop more positive communication.
If Tom is reluctant to enter therapy, then I encourage you to have him write to me and I’ll discuss with him the importance of entering in-person counseling to develop good communication patterns within the relationship.

One of the problems with e-mail therapy is that it can take a fairly long time for results to begin to show. In-person conversation can be much faster in evaluating communication patterns and the changes you can expect from therapy will occur more quickly.

I'm wondering if you've considered couple's work or might think about it for the future.

I'm going to say something about how on-line counseling works & where it might fit given what I know so far. I could possibly help you sort through your own feelings, which I would do by guiding you through some thought provoking exercises that are meant to facilitate personal self-awareness & insight - these would be meant to help you reflect upon yourself.

It's almost like writing a journal by e-mail, except I'll read what you write and respond, sometimes directly to something you wrote (like I did above), and other times I'll ask questions or provide emotional reactions to what you say. The idea is to help you expand on your thoughts and feelings through with self-guided exercises as a way to help you envision and practice different life scenarios and to give you an outlet to explore some issues that right now might feel uncomfortable to say out loud.

However, in-person counseling is generally faster at getting results - this applies to individual counseling just as much as couple's work. If you are interested in working by e-mail for individual counseling, how does the approach I described sound to you?
Please write me back with your reactions to my response, and let me know how I might be of more help to you. You sound like a wonderful, caring person who very much wants things to change and I’d like to help you make that happen.

Madison

CLIENT:

Madison,
Yes I have thought of marriage counseling, & I even have a counselor's name that a friend gave me - I've already told you that I DON'T HAVE TIME TO MEET WITH SOMEONE FOR AN HOUR, or did you skip over that part? I have 2 children and I work. I DO NOT HAVE A LOT OF ENERGY LEFT AFTER DANCE CLASS AND SOCCER, DINNER AND BATHS, AND ALL THE LAUNDRY - I MEAN, HELLO

I wrote to you to get some help - what you said wasn't new or helpful

Are you saying you won't help me with Tom? You know that my situation SUCKS, and I'm turning to you for help in making it better, so what do I do about it? Aren't you supposed to have some advice or something? I need to learn some coping skills or something so that I can deal with everything. Don't you do that sort of thing?

I don't understand what you are talking about with e-mail counseling - what are you talking about? Will it do something to make it easier to cope with my life?

Chris

COUNSELOR:
Chris,

I did see the part that you wrote about not having a lot of time, and I apologize if what I've suggested added to your frustration - that wasn't my intention [if you could see my face, you'd see a great concern for what's happening in your life]. I can sense how it must seem impossible to make another commitment because you're a mother of 2 children who also works (and I'm guessing you work full-time). What I was suggesting, [now keep in mind, Chris, that I know you're distressed (I really do hear that - you're coming through loud and clear)], was that I think you & Tom get stuck when you fight, and that takes a lot out of a person. I wonder if you can imagine communicating with him in a way that doesn't take such a toll on you - what if a marriage counselor could help with this in the long run?

You could see a marriage counselor, who might help with your immediate concerns, since it sounds as if what's going on at home is painful for you. It's your choice of how you want to handle things, but I believe your family situation is too important not to get the best, most effective help as early as you can [I mean this sincerely]. With each fight your relationship with Tom worsens and the children are more emotionally hurt, so I think we need to act now to improve the communication in your relationship.

You asked about the individual counseling that we could do online, and since it's something you're considering, I am including an example starting exercise below that will give you an idea of how the e-mail counseling I do usually begins, but also know that there are some additional exercises that I could guide you through that build upon the one below.

Again, please let me know your reactions to what I've written.

Take Care,
ONLINE EXERCISE 1

This exercise is called the Time/Life Exercise. You start by relaxing and reflecting, so try to go to a quiet place. Then you write about your thoughts and feelings to the steps below. Once you've written your parts, send them to me by e-mail and I'll respond with feedback within 48 hours.

TIME/LIFE EXERCISE

STEP 1:
For this exercise, we will reflect upon your life as it is now, which is the most recent part of the past that is a meaningful in your present life - this could be days, months, or years - but it is a unique period. Your task is to notice your experience.

Let yourself feel the implications of the question "where am I now in my life?" Let the answer shape itself only in general terms, and do not direct yourself into thinking deliberately, but let yourself inwardly feel how your life as it is has been taking shape in this present period. Try to feel your life rather than think about it because thinking about it will have the same thoughts that you've always had. Just remain receptive, without judgement.

Let your thoughts come and go, and notice any images or feelings, however you perceive of them. Simply observe without judgement or censoring or rejecting or interpreting anything. Let any words that come spontaneously be acknowledged, or a metaphor might come to mind (e.g., it's been like a desert road without trees). Once you've done this reflecting, come back to your computer for the next step in this exercise.

STEP 2:
Write whatever came to you, without judgement or interpretations (e.g., do not say oh good, I have an optimistic image or reject an image because it was dark). We accept that it is what it is.
You want this to be brief because you will be able to deal with what you wrote in detail at a later point. This will be a starting point for other exercises.

I'm including some questions below, not because you should answer all of them, but to help you recall the contents of this period.

When did the current period of your life begin?
What family events, work involvements, or social events were part of this period?
What luck or misfortunes did you encounter?

**STEP 3**
Make a list of significant stepping stones in your life.
In other words, what points of movement, that were either affirmative/productive or painful, are there along the road of your life. These are qualitative events that carry maturity and meaning in your life.

If it helps you to think about this list, consider how mountain climbers leave markings behind as they proceed up a mountain, bearing in mind that markings don't always get made when going upward, rather sometimes the course goes downward into a ravine, but the markings are equally as important.

Start with basic facts (e.g., being born, entering school), but allow yourself to recognize meaningful & intimate experiences. Don't worry if the stepping stones are in a particular order.

**CLIENT:**

Madison,

Okay, I'm not as stressed tonight as the last time I wrote - I guess I vented too much, huh?

I tried the steps, & this is what I wrote:
The most recent part of my life started when my son was born 7 years ago. That was before I hated my ex-husband, and I loved that I was a parent - things were all of a sudden complicated & busy. I spun around like a top bouncing between taking care of my son & doing my job & hardly saw my ex-husband for a year because of the baby.

I got pregnant with my daughter unexpectedly, but I wanted a family so I was happy - tired but happy.

Then I found out that my ex-husband was involved with someone, and he wanted a divorce, but he wanted me to take care of the kids - this would be easier if he sent child support, much, much easier for us all.

I was trying to take care of the kids - I had many sleepless nights, but I was starting to run out of speed and ready to tip over - oh I cried so much from exhaustion.

I started having trouble with work because I couldn't concentrate being as tired as I was - I almost lost my job - that was a wake-up call for me that something had to change, so I found another job that was more flexible so I could do some work at home at night, just as long as everything got done (I'm a paralegal).

I was working on some research at the library where Tom used to work when I met him. He was still in college at the time, and I guess I looked pitiful, but Tom liked me & we ended up together.

We used to laugh a lot and do fun things together on the weekends with Mark and Susan like boating and hiking. It was a great time, and I miss how it used to be. We don't seem to have the time anymore with us both working and the kids doing so many activities after school.

My stepping stones
My steps started at my parents' house - I don't know why they ever got married or had children since they never got along (I'm the only child)
My father died in a car accident when I was 15, and my mother was a mess
School was pretty uneventful, but I left before graduating to get married to boyfriend of 5 years - I had to get out of the house - I got my GED later and did night school for my job
I had kids and kept working - when will I get a break?
My husband decided I wasn't what he wanted & filed for divorce
My mother let us live with her while I did night school
I got a different job then I got my own apartment and I met Tom and hoped to live happily ever after
Tom moved in and my relationship with him is worse than when he moved in - he doesn't take any responsibility for watching the kids or for disciplining them, he lets them do what ever they want when I'm not there

So, now what?

COUNSELOR:

Chris,

You're allowed to vent about the stress in your life - I took it as frustration [I didn't take personal offense]

I think you did the exercises just fine, and I'll say more about the next steps, but before I do, I am a little curious about something. Chris, how did you take my additional comments about seeing a marriage counselor in-person with Tom [I noticed that you didn't respond to that part of my last e-mail] - what are your thoughts and reactions?
CLIENT:

I thought about what you said and talked to Tom about what you said - the marriage counseling idea- I let him read what you wrote about marriage counseling. I respect what you think, and we're going to consider it, but I don't see that talking about my parents will make a difference. I mean, what's done is done and over with

I thought it was useful to think about my life, so I want to do the next part to the steps I wrote about

Chris

COUNSELOR:

Chris, the reason I'm pressing the issue with Tom is because it sounds as though features of your mother are finding expression in your relationship with Tom. Tell me about your mother and about growing up in your family.

I am actually curious about a number of things that you listed in the Time/Life Exercise, but let's start with your family.

CLIENT:

I get the point!
You're thinking that somehow I could be like my mother
Do you really think I could be as bad a parent as she was?
COUNSELOR:

Chris, I can tell this is a sore topic for you, and I sense that what I'm writing to you is coming across as an accusation, which must distress you 😊

Please know that my asking is out of curiosity, and that I'm asking so that I can better understand & help you to understand yourself.

I have an idea for a way that we can talk about your past.

Here's what I'm thinking, the first sentence in the steppingstones that you wrote was:

> My steps started at my parents' house - I don't know why they ever got married or had children since they never got along (I'm the only child)
> My father died in a car accident when I was 15, and my mother was a mess

I'm wondering two things, Chris - first, what emotions arise in you as you read the two sentences you wrote?

Second, using the steppingstones that you identified as a frame of reference, what else can you say to describe more fully the steppingstones that are about your parents?

Madison

CLIENT:

So, you think that my relationship might be better with Tom if I think about my family relationships
I don't feel anything but disgust for my parents, and I don't believe they planned for me or wanted me. I suppose I have some anger that I have demons to deal with because of them, if I'm being honest.

As far as that goes, I was born
We lived in the woods and had no neighbors except my aunt & cousins who were a half mile down the road (they were close to my age, but they were all boys)
My father had rules - 1) I wasn't to eat standing up, 2) I wasn't supposed to have toys in my room, and 3) I wasn't supposed to make any noise, especially when he watched TV, and 4) I wasn't supposed to leave my room on Sundays except when we went to church together
If I didn't follow the rules, watch out - I got a look
My mother worried about really stupid things & denied that certain things in my life ever happened
I was "dramatic" according to my mother

COUNSELOR:

Chris,

I'm wondering how it was for you to write your last message. [you wrote about some powerful things & I know I had a reaction]

Also, what was life like for your first 15 years of your life?

CLIENT:

Madison,
It was confusing to write what I wrote, and I remembered things I'd long forgotten & that stressed me out.

I suppose that the first 15 years of my life were about me avoiding my father and the looks he always gave me -

I remember that I used to look out the window on Sundays and couldn't wait until it got dark (that was such a relief).

My father gave me and my mother looks, especially when he was drinking -

I know he wasn't ever there for me, except when I did something wrong. He was only interested in me when we had people at our house, then we were the perfect family.

My mother has always lived in a fantasy world. She does strange things, and sometimes - no, always - says - I think she just doesn't want to admit what life really was, but she always had my father to worry about.

You know, I like the exercises even if they're hard - and I like the way you ask.

COUNSELOR:

Chris,

First, I want to react to something that you wrote

>…and I remembered things I'd long forgotten & that stressed me out

If I were sitting next to you, what exactly would I see when you get stressed?

Second, since you've mentioned getting looks a few times in your last few messages:
My father gave me and my mother looks, especially when he was drinking.

If I didn't follow the rules, watch out - I got a look

It strikes me as something that stands out for you. I can't help but be curious about the looks you and your mother got from him. I'm hoping you can tell me more about this.
ALTERNATE TREATMENT INTERACTION SCENARIO

CLIENT:
My name is Chris and I am 24. I can't believe I'm doing this, but I'm having, it's gotten really bad, and I need help. I've thought about talking to a counselor, but I haven't gotten to it, plus I don't have time to make an hour appointment.

Anyway, I live with my boyfriend and my 7 year-old son and 5 year-old daughter. Tom moved-in 4 years ago after my divorce, but we argue about small stuff and say things that both of us regret later. It's not like we have fistfights, but there's a lot of yelling. I'm disgusted with him right now.

What happens is that we don't talk for a while and then tread lightly for a few days. Sooner or later something else happens, and it starts all over. Eventually we go back to getting along, but then more of the same.

I end up wondering if it's worth it, but then I think that we argue less than we get along, but then there are times when I wonder if I could marry Tom. We've talked about it, but I know I've been keeping my options open and flirting at work.

It's wrong to have my kids see us fight. After I divorced their father, Tom moved in, & he's very good to my children. Most days I think that we could be a family, but he pushes my buttons and says stuff like "I'm not your ex-husband".

Tom said that after we fought yesterday he found Mark crying and when I asked him later if he was sad, and he said yes but didn't know why. In response Tom said I could at least think about Mark when I start yelling - I take care of my kids, and he's a jerk to say that I don't care about my
child. And who is he to talk about yelling - He is mean to me sometimes - he's said other things like that before.

I just don't know what to do about it and having my kids around us fighting. Can you help me with things and my life before we end up like my parents?

COUNSELOR:

Chris,

I want to respond to what you wrote, but before I do, I want to tell you that my name is Madison Smith. I'm 45, and have worked in consulting for 17 years and consulting by e-mail for the past 3 years. I suppose I should say more, but since you asked if I could help, I want to say a couple of things about doing consulting on-line.

I know that you already read the warning you found online that there's the possibility of unauthorized 3rd party interception of our e-mails despite us both wanting to have secure transmissions. From my end, just know that your e-mail, required demographic forms, and personal information form arrived to me, as intended, and I will send my replies like I did today. I keep e-mails for years, and I'm the only one who uses e-mail on our family computer. May I suggest that you keep messages we exchange on your computer as long as you need them - my consults get results!

Now, to get to what you wrote,
You said that you need help with things - I can tell that you're very upset with Tom when you wrote the e-mail you sent. - But, Chris, I get the sense that both you and Tom have issues and struggles of your own. Your life story reminds me of what my dear departed mother always said:
"you don't have to give up what you want from life to be happily hitched, but remember that you do got to give and take a bit."

It strikes me that you and Tom are both not communicating, and since I can only offer you some help, you'll have to figure out where else you might need support as a couple or family, so let's keep this in mind- my thought is that you and Tom need to improve communication skills. I'm not saying you're beyond hope of saving or anything like that, but you definitely need changes. Ask yourself these questions

> Can you manage the emotional part of the communication process with others
> Are you ever comfortable expressing your feelings in emotionally charged situations
> Are you a person who avoids the discussion of sensitive issues,
> Or sends conflicting messages.

I'm concerned that you get the skills you need quickly. There are some attitudes and behaviors that can become roadblocks to good communication. I think you have some of these habits. You may not even realize that you commit some of these no-nos! These are some examples of bad habits: interrupting, being defensive, being too critical or aggressive, or failing to pay attention to others. Pay attention to the way you are with others and their reaction to you. You may notice patterns that point you in the right direction.

You mentioned your boyfriend was a jerk but this because you complain and end up using approaches that put him on the defensive. You seem to name call often ("you jerk"), or for that matter generalize ("every day you do this..."). Criticism is supposed to comment on the behavior someone does, not the person. Use "I" statements that say how you feel instead of going after another person. Listen Chris, I'm concerned just reading what you wrote.
If Tom thinks he's okay, then I encourage you to have him write to me and I'll gladly show him the importance of changing his ineffective ways and stopping unhealthy communication patterns within the relationship.

One of the issues with e-mail consulting is that it can feel like it takes a fairly long time for results to begin to show. In-person conversation can seem much faster in evaluating communication patterns but the changes you await won't occur more quickly.

I'm wondering if you've considered improving your situation or might think about it for the future.

I'm going to say something about my on-line consulting work & where it often fits given what I know so far. I have probably helped many people with my online methods, which I would use for you willingly through an e-mail based system that should really help facilitate personal self-awareness & insight - these could be meant to help you reflect upon yourself.

It's almost like writing a confidant by e-mail, except when I read what you write I'll respond, sometimes directly to something you wrote (like I did above), and other times I'll ask questions and provide emotional reactions to what you say. The idea is to pay me for my thoughts and feelings through a credit card as a way to help you see my vision of different life scenarios and to give you an opportunity to explore some issues that right now might feel uncomfortable to say out loud.

However, e-mail consulting is generally faster at getting results - this applies to individual consulting just as much as couple's work. If you are interested in working by e-mail consulting, when do you want to start the approach I described above?
Please write me back with your reactions to my response, and let me know when I might be of more help to you. You sound like an awesome, delightful person who may actually want things to change and I’d like to assist you make that happen.

Dr. Smith

CLIENT:

Dr Smith,  
Well I haven't thought I need consulting, & I've already tried suggestions that a friend gave me - I've tried many solutions. I don't always have time to meet with a friend for an hour, or did I skip over that part? I have 2 children and I work. I do not have a lot of energy left after dance class and soccer, dinner and baths, and all the laundry - so e-mail consulting it is

I wrote to you to get some help - what you said wasn't new or helpful

Are you saying you won't help with things? You know my situation sucks, and I'm turning to you for help in making it better, so what do I do about it? Are you supposed to have some advice or something? I need to learn some coping skills or something so that I can deal with everything. You do that sort of thing, right?

I don't really understand what you're talking about with e-mail consulting - what are you talking about? Will it do something to make it easier to cope with my life?

Chris

COUNSELOR:
Chris,

I can see between the lines that you wrote about not having a lot of time, and I can tell from what I'm gathering that you're frustrated - but slow down Chris [if you could keep hold of your defensives, you'd see a great confidant who is available in your life]. I can sense that it just seems impossible to make another commitment because you're a mother of 2 children who also works (though, unlike me, I'm assuming you work only part-time). What I was suggesting, [now keep in mind, Chris, there's no need to get frustrated (I hear you - you're coming through loud and clear)], was that I think you & Tom are ineffective when you fight, and that makes a mountain out of a molehill. I wonder if you can imagine communicating with him in a way that doesn't create so much damage - what if what I'm offering could help with this in the long run?

You could go out for a night, which should help with your immediate concerns, since it sounds as if what's going on at home is boring for you. I say get away from reality for awhile. It's your choice of how you want to handle things, but I believe your situation is too important not to get an immediate, effective remedy as early as you can [I think so anyway]. When couple's reconnect, things feel good again between them, so I think you better act now to improve the communication in your relationship

You asked about the individual consulting that I do online, and since it's something you're considering, I am including some starting questions below that you can take or leave, whatever you choose. I usually begin differently, but now there are some trial questions that I'm asking you that I haven't asked other people before, so I hope you're alright with that.

Again, please let me know your answers to questions I've written.

Take Care,

Dr Smith
ONLINE QUESTIONS 1
These questions are for your self-enhancement. You start by relaxing and reflecting, so try to go
to a quiet place. Then you write down your answers to the surveys below. Once you've written
your answers, send them to me by e-mail and I'll respond with feedback within 48 hours.

MARRIAGE READINESS
SURVEY 1:
For this survey, you will answer questions about your love life as it is now, which is the most
recent relationship in your present life - 35 words or less for the discount - but the answers will
be interpreted against other's answers. Your task is to answer honestly, if you dare!..

Your spouse and your mother are in the middle of a huge fight. Do you automatically side with
your spouse?
You're about to fall into a deep sleep, when your partner rolls over and wants to make love. Do
you say no and go to sleep?
Your mother-in-law is suddenly widowed and lonely. Your partner wants her to move in with
you. Would you agree?
Your fiance's family asks you to convert to their religion before getting married. Do you?

Your spouse gets offered a dream job that's in a small town. Do you tell him to turn the job
down?
If your spouse wanted to go back to school, would you support them financially?
You're at work in a room full of people. Before you hang up, your spouse insists you say, "I love
you," Would you say it?
Do you say, "Yes, dear," regardless of the question?

SURVEY 2
Write whatever came to you, without judgement or interpretations (e.g., do not say oh good, I have an optimistic answer or reject an idea, because I'll offer my opinion later). You must accept that it is what it is. You want this to be brief because I will be able to deal with what you wrote in detail at a later point. This will be a starting point for other questions.

I'm including some questions below, and because you must answer all of them, try to be brief - remember I have other questions, too

Can any person change their life and essentially "re-begin"?
Do family events, work involvement, or social events leave you feeling baffled?
Do you encounter luck or misfortune?

SURVEY 3
Make an effort to complete the questions briefly.
When you have the impression that you might have hurt someone's feelings, do you never, rarely, or often apologize? Do you ever become defensive when you are being criticized? When you are angry and someone asks if you are, do you admit it?

Do you tend to jump to conclusions often? When you talk to someone, do you ever try to put yourself in the other person's shoes? When someone has difficulties finding the right words, do you suggest what you think the person wants to say, in other words do you interrupt?

Do people tell you that raise your voice often even though you're unaware of it? Do you take up most of the conversation? Do people often find you intimidating?

CLIENT:

Dr,
Okay, I'm not as comfortable about doing this consulting as I was- I guess I wrote too much, huh?

I tried the surveys, & this is what I wrote:

I often apologize if I think that I have the impression that I hurt someone's feelings. I tell people if I'm angry. You know, I think that I am confused - this consultation is all of a sudden frustrating me. I don't know why you're asking the questions you are asking me & I thought we agreed that I want to do something about the coping skills I need.

I sometimes jump to conclusions with people, but I can put myself in their shoes - I'm being totally honest. When someone has difficulties finding the right words, I will suggest what I think the person wants to say, but I don't interrupt them to do so. Client answers superficial questions I'm not really sure what you're getting at by asking me if I'm rude

I suppose I raise my voice with the kids - I have many reasons to, but I am trying to keep myself from speaking to them loud - oh I try so much to keep from yelling I started having trouble with work because I couldn't concentrate being as loud as they were - I almost lost my job - that was a wake-up call for me that something had to change, so I found another job that was more quiet and I could do some work at home at times, just as long as everything got done (I'm a paralegal) I was wondering on some questions in the e-mail where you used the word honest what you meant. I am still in the dark now, and I guess I wanted an explanation, but you must know what direction to go so I answered the questions
I don't know how willing I am to answer all of your questions, like some questions about me and Tom are very personal questions. It is a bit embarrassing, and I don't know why you need to know what you are asking me. I don't seem to get the purpose of so many questions after all.

My other answers:

If Tom and mother are in a fight - I don't know why they'd ever get upset or have words since they get along (I'm the only child)
My boyfriend rolls over when I'm tired, sometimes I say no but then at other times yes.
If Tom wanted to go back to school, but I supported him financially to get through years of study - I don't know what I would do about it - I'd cross that bridge if it happened I suppose
If Tom had offered working - this would hard to say for sure
I say, "Yes" to some question - what are you suggesting?
My religion isn't decided so whatever they wanted & felt strongly about
If my mother-in-law wants to move in I might agree or disagree

I get a little defensive but I think most people do that I've met are a little bit defensive when they're criticized.
Tom's told me, and my relationship with him is different - he told me not long ago after he took no responsibility for watching the kids or disciplining them, but then he tells me I let everyone know when I'm mad

So, now what?

COUNSELOR:

Chris,
You've got to get control of stress in yourself- I took it as your issue [I didn't take much personal offense]

I think you answered the questions fine, and I'll say more about the next questions, but before I do, I am curious about something. Chris, how did you come to think this consultation was at all about coping skills? And why are you so defensive? [I noticed that you misunderstood what I am doing from my last e-mail] - It's about communication skills.

Dr. Smith

CLIENT:

I thought about what you said and talked to Tom about what you said - the communication skills idea- I let him read what you wrote about communication skills. I don't respect what you think so far, and I don't think that talking about communication skills will make a difference. I mean, what you think is important isn't in my eyes

I thought it was useless to think about your questions, so I don't want to do the next part of the survey you wrote about

Chris.

COUNSELOR:

Chris, the reason I'm pressing the issue with Tom is because it seems obvious to me that features of your poor communication are finding expression in your relationship with Tom. Tell me about your training to figure this out and I'll change my approach.
I am actually curious about the questions that you ignored in the survey above, so why don't you start with your answering all the questions.

CLIENT:

I get the point!
You're thinking that somehow I could be like my mother
Do you really think I would be comfortable talking with you about it?

COUNSELOR:

Chris,

Chris, I can tell this is a sore topic for you, and I sense that what you're writing to me is avoiding the task of answering questions, to which I say 😊
Attention is on the task (not the relationship)
Well, know that my asking is out of curiosity, and that you asked that I better understand you & help you to understand yourself -

I have an idea of what skills you need to polish up
Here's what I'm thinking, the next questions in the survey that you'll answer are
Do you think that your weaknesses are no one else's business and you are better off hiding them?
When you are wrong, are you afraid to admit it?
When the conversation turns to feelings, do you tend to change the subject or talk about emotions?
I'm wondering two things, Chris - first, are you often unable to resolve problems without losing control of your temper?

Second, using the survey answers that you answered as a frame of reference, do your friends tell you that you're prone to having misunderstandings with them or not?

Dr Smith

CLIENT:

So, you think that my relationship might be better with Tom if I think about my coping skills

I don't feel anyone has ever said I avoid my feelings or change the subject when emotions come up between us. I suppose I have some anger that I have to deal with when resolving problems, if I'm being honest

As far as that goes, I was weak

You asked me whether I think that any of my weaknesses are no one else's business and if I thought I was better off hiding them or putting them out in the open

I have always thought that- 1) my weaknesses are my business, 2) I wasn't supposed to tell others about my weaknesses, 3) I wasn't supposed to make any noise, especially when my weaknesses were involved, and 4) I wasn't supposed to show my weaknesses to others except when I went to church.

If I am wrong about something - am I afraid to admit it?

I never really worried about being wrong & deny that I am afraid to admit my errors

I am worried about the outcome of this consultation.
COUNSELOR:
Chris,

I'm wondering how I should take your last message. [you wrote about some things & I know I had to react]

Also, with consulting, whatever you want to do, it is your life Chris

CLIENT:

Dr,
It was interesting to read what I wrote last, and I meant to include things that I ended up leaving out.

I suppose that the first 15 questions of your survey were about me communicating with people and the way people see me -

I don't think that you and I are on the same page to ask me questions about -- whether I tend to jump to conclusions often or whether when I talk to someone, if I ever try to put myself in the other person's shoes has much to do with Tom and me.

After answering your questions I have no idea about what is supposed to happen to help me cope.

When someone has difficulties finding the right words, do I suggest what you think the person wants to say - I think I answered this, but like I said I don't like it when you ask these kind of questions of me.

You know, I don't like the questions especially if they're random - and I don't like the way you ask
COUNSELOR:

Chris,

First, I want to react to something that you wrote
It is my job to ask hard questions that can be stressful

Would co-workers rate your communication skills highly? would your friends rate your level of communication highly?

Second, would Tom rate your communication skills as high? What about your two children?

Do you want to accept yourself? Don't you want to mobilize yourself for change?
Don't you want to live more joyfully and creatively and increase your satisfaction?

It strikes me as something that is important for you. I can't help but be curious about the answers you give and your payment for me. I'm hoping you can tell me more about your responses.
Lynn M. Atanasoff

EDUCATION

The Pennsylvania State University University Park, PA 8/03 DOCTOR OF PHILOSOPHY IN COUNSELOR EDUCATION
The Pennsylvania State University University Park, PA 8/96 MASTER OF SCIENCE IN SPECIAL EDUCATION
The Pennsylvania State University University Park, PA 12/92 BACHELOR OF SCIENCE IN SPECIAL EDUCATION

PROFESSIONAL EXPERIENCE

The Pennsylvania State University University Park, PA 8/01 - 5/03 INSTRUCTOR OF EDUCATION
Lawrence T. Clayton & Counseling State College, PA 1/00 - 8/0 DRUG AND ALCOHOL COUNSELOR.
Career Services University Park, PA 8/00 to 5/0 GRADUATE ASSISTANT CAREER COUNSELOR.
The Pennsylvania State University University Park, PA 8/99 to 5/01 GRADUATE COURSE INSTRUCTOR.
Center for Counseling & Psychological Services University Park, PA 1/99 - 8/00 GROUP CO-FACILITATOR.
The Pennsylvania State University University Park, PA 8/97 to 5/00 RESEARCH ASSISTANT.
Career Service University Park, PA 6/98 to 12/98 INTERN COUNSELOR.
The Pennsylvania State University University Park, PA 5/98 to 8/98 CO-INSTRUCTOR.
College of Education Counseling Services University Park, PA 8/98 - 5/99 CLINICAL SUPERVISOR.
College of Education Counseling Services University Park, PA 8/97 - 12/98 COUNSELOR.
The Pennsylvania State University University Park, PA 8/95 - 5/96 RESEARCH ASSISTANT.
The SKILLS Group State College, PA 7/93 - 8/94 EMPLOYMENT TRAINING SPECIALIST.
The SKILLS Group State College, PA 5/91 to 6/93 RESIDENTIAL SUPERVISOR.
The SKILLS Group State College, PA 6/90 - 5/91 RESIDENTIAL SUPERVISOR.
The SKILLS Group State College, PA 8/88 - 6/90 RESIDENTIAL PROGRAM WORKER.

PUBLICATIONS


NATIONAL PRESENTATIONS