

2005

Online counseling: dynamics of process and assessment

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Online counseling: Dynamics of process and assessment

by

Michael John Mallen

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Psychology (Counseling Psychology)

Program of Study Committee:
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2005

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For the Major Program

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ABSTRACT

The rise in popularity and use of computer-mediated modes of communication such as email and synchronous chat have resulted in the potential for new delivery methods of mental health services. The present study investigated the dynamics of an initial counseling session held in a synchronous chat environment between therapists-in-training at various graduate programs across the country and a trained confederate posing as a client. Transcripts from the online sessions were analyzed to investigate therapist responses and interventions in the online environment. Therapists-in-training were also asked to respond to questions concerning their satisfaction with the experience, the relationship they were able to form with the client, and previous online experience. Participants gave an assessment of the client and responded to statements about online counseling. Results demonstrate that the therapists-in-training expressed more positive views about online counseling after they had conducted the session in terms of the potential for a therapeutic alliance and desire for future training; however, participants expressed more negative views about the amount of work that could be accomplished during online counseling sessions. Therapists-in-training were also able to accurately diagnose their client's presenting concerns at the conclusion of the session. The implications for the future directions of online counseling research and practice are addressed.

INTRODUCTION

Online counseling is no longer something that will take shape in the future. It is possible for a person to log onto the Internet right now, find a professional counselor, and have a session through his or her computer. There are already websites devoted to consortiums of counselors (e.g., helphorizons.com, netcounselors.com) and hundreds of websites created by private practitioners to advertise their services. Over one hundred million people per month use the Internet to search for health information per month (Harris Interactive, 2002), and the practice of online counseling is predicted to increase in the next 10 years (Norcross, Hedges, & Prochaska, 2002). There is a clear need to examine the effectiveness of different online counseling and behavioral services and to ensure that these services are provided in an ethical and professional manner.

Clients are using videoconferencing, synchronous chat and asynchronous email to communicate with professional psychologists in place of or in addition to face-to-face counseling. Yet the majority of counseling psychologists are not involved in the provision of these services (VandenBos & Williams, 2000), and few researchers have investigated whether or not these counseling services are a viable means of treatment for clients. The problems arising from these trends are two-fold. First, psychologists may be missing opportunities to reach new clients, as services that are typically provided by psychologists in face-to-face settings are being delivered by other professionals or even quasi-professionals online. Second, an increasing number of individuals are exploring the Internet for mental health and behavioral services, and although preliminary research has shown online counseling to be beneficial for clients, it is still unclear whether or not online counseling is an

effective mode of service delivery. As the demand for online counseling increases, it is important to ensure that clients are provided with efficacious services by trained professionals with adequate skills and competencies. The first step in this process is to evaluate new modes of service delivery, such as counseling sessions delivered through synchronous chat. The current study fills in some of the gaps in the literature by focusing on how therapists may respond to a client in a synchronous chat environment.

Research and Practice Issues Related to Online Counseling

One of the biggest challenges for online counseling, in the eyes of many psychologists, may be the possibility of connecting with a client in a meaningful way through distance communication technologies. Without the benefit of contextual and nonverbal cues, the ability to form a therapeutic relationship might be hampered. Furthermore, because of the distance involved in online counseling, it might be difficult for the client and counselor to fully explore the impact of person-environment interactions. As a result, it is important to consider whether or not online counseling can accommodate for the lack of nonverbal cues and increased distance. If online counseling can overcome these limitations and a therapeutic relationship can be successfully managed, it will be important to discover how these skills can best be taught to the next generations of counseling psychologists.

Another important question about the practice of online counseling concerns the appropriateness of the mode of treatment for a wide variety of clients. There has been an ongoing dialogue regarding the appropriate populations for online counseling treatment (e.g, Griffiths, 2001; Landau, 2001; Manhal-Baugus, 2001; Shernoff, 2000; Stofle & Harrington, 2002; Suler, 2001; Zelvin & Speyer, 2004). Counseling psychology is predominantly concerned with normal development (e.g, Erikson, 1959; Piaget, 1952) and helping

individuals cope with both everyday problems, such as work (Hesketh, 2000), and life transitions (e.g., Brammer & Abrego, 1981; Gelso & Fretz, 2000; Schlossberg, 1981). By assessing how therapists work with clients presenting with either anxiety, depression, or a mixture of the two concerns, the study provides information about therapists' potential in an online setting.

Acronyms and Definitions

Throughout this paper, several terms will be used to describe technologies and acronyms will be used to condense certain common phrases in order to save space. A distinction between face-to-face (FtF) communication and computer-mediated communication (CMC) will often be given. Face-to-face (FtF) means that the parties involved are physically present in the same room at the same time. Computer-mediated communication (CMC) means that the parties involved are in different locations and are communicating through one of several distance communication technologies. Distance technologies focused on in this review are asynchronous email, synchronous chat, and videoconferencing.

Asynchronous email is the most common form of CMC, and can be considered a method of online letter writing. In asynchronous email, an individual composes a message through an email provider, such as America On-Line, Hotmail, or Yahoo, and sends the message to another individual. Once the message is sent, the recipient can view the message at his or her convenience and respond to the message in a similar fashion with another email. It is considered asynchronous because the communicators do not need to be online at the same time, and communication can occur between two parties in regular or irregular intervals of hours, days, or weeks. Synchronous chat is similar to asynchronous email in that an

individual composes a message and sends it to someone else. The difference is that the recipient is also online and immediately views the message as it appears on the screen. Once the message is viewed, a response is typed and sent back. This process repeats until one party decides to leave the conversation. This could be considered analogous to online telephone conversation. It is considered synchronous because the communication is happening in real time with both parties present.

Videoconferencing is less common than asynchronous email and synchronous chat, but it provides more dynamic communication between parties. Videoconferencing allows the parties involved to send and receive not only typewritten messages, but also images or video. There may or may not be an audio component as well, meaning that it is possible to communicate through voice instead of through typewritten messages. Similar to chat, videoconferencing is considered synchronous because both parties need to be present during the communication. Thus, video teleconferencing could be seen as an analog to fact-to-face meetings.

A significant challenge associated with online counseling and the various technologies involved in the delivery of services is reaching an agreement regarding a definition of what is and what is not online counseling. The use of distance communication technologies to deliver mental health and behavioral services has increased considerably over the past 10 years (Huang & Alessi, 1996; Sampson, Kolodinsky, & Greeno, 1997). The delivery of these services has been referred to with a variety of terms, including Email therapy (Shapiro & Schulman, 1996), telepsychiatry (Brown, 1998), Internet psychotherapy (Stein, 1997), cyber-psychology (Schiano, 1997), cybertherapy (Stricker, 1996), and webcounseling (Bloom, 1998). In this paper, online counseling is defined as

Any delivery of mental or behavioral health services, including but not limited to therapy, consultation, and psychoeducation, by a licensed practitioner to a client in a non face-to-face setting through distance communication technologies such as the telephone, asynchronous email, synchronous chat, and videoconference.

This definition covers the array of psychological services that are currently being delivered through existing technologies. In addition, this definition accommodates new technologies and innovations that either have yet to be discovered or reach a critical mass in the marketplace (Oliver, Marwell, & Teixeira, 1985).

Purpose of Study

The purpose of the current study was three-fold, and fits into the current need to understand the dynamics of the process and outcome of online counseling. The first goal was to collect more data related to how therapists work in an online counseling environment. Specifically, this study investigated the responses and interventions used by therapists-in-training in a one-time only synchronous chat session with a mock client. By analyzing the responses of therapists-in-training, a clearer picture of the similarities and differences between face-to-face and online modes of counseling can emerge. The second goal of the study was to collect data related to the process and outcome of an online counseling session from the perspective of the therapist involved in the delivery of services. Data regarding therapists'-in-training levels of satisfaction, closeness, and their assessment of the mock client were collected. This information contributes unique information to the online counseling literature. The third and final goal was to investigate how therapists' attitudes regarding the effectiveness of online counseling might change after they have conducted a therapy session through synchronous chat. To accomplish this goal, therapists-in-training were presented with a survey to measure their attitudes about online counseling before they conducted the counseling session, and were presented with the same measure after they met

with their client in the online mode of treatment. The information provided in this pre-posttest design provided unique data regarding how therapists'-in-training views about online counseling changed after they were involved in the provision of mental health services through synchronous chat with a client.

Hypotheses

The current investigation made several predictions before the data collection. First, it was predicted that therapists-in-training would successfully form a working relationship with their client in an online counseling session through synchronous chat.

The second hypothesis stated that therapists-in-training will be able to pick up on important presenting issues and offer an accurate clinical diagnosis in an online counseling session through synchronous chat.

The third hypothesis stated that therapists-in-training will be comfortable with the online client's presenting issues.

The fourth hypothesis stated that therapists-in-training will behave in a similar fashion during their online session when compared to published data from face-to-face counseling studies.

The fifth hypothesis stated that therapists'-in-training interventions during the session will affect their attitudes after the session.

The sixth and final hypothesis predicted that therapists-in-training will experience a positive change in their attitudes toward online counseling after they have conducted a synchronous chat session.

LITERATURE REVIEW

The literature review will first provide a general overview of process and outcome research in traditional face-to-face counseling. Second, the existing research on online counseling will be reviewed and discussed to form a foundation in this field of study. Third, collected studies from the computer-mediated communication literature, which have possible implications for psychological research in this domain, will be addressed.

Overview of Process and Outcome Research

For years researchers have been examining the counseling relationship in traditional face-to-face therapy. A glance through the process and outcome literature (Hill & Corbett, 1993; Hill, Nutt, & Jackson, 1994) demonstrates the trials and tribulations of such investigation. The dynamics of the relationship between a counselor and a client are multitudinous, complex, and generally fascinating to ponder. The questions for those interested in researching the counseling relationship have always been “Why does it work, and how does it work?”

Researchers have devoted countless hours to investigating counselor behaviors within the session, client satisfaction, the therapeutic alliance, and a litany of client outcome measures, just to name a few dynamics of counseling that have been examined up to this point. Greenberg and Pinsof (1986) assert that since the 1970s, psychotherapy research has taken an unprecedented interest in the process of change. The accessible technology to record sessions by audio and video and the open atmosphere in which therapists were trained led to opportunities to review and discuss what went on in the therapy room. As outcome measurement became more sophisticated and its findings more stable, researchers realized that "to say that something worked (or failed) without being able to specify what it was that

worked undermines the replicability criterion of scientific research" (p. 5). A review of individual psychotherapy process and outcome research (Goldfried, Greenberg, & Marmar, 1990) summarized the burgeoning repertoire of process descriptions and measures. Hill, Corbett, Kanitz, Rios, Lightsey, and Gomez (1992) added another review two years later. Process variables ranging from aspects of language and vocal quality of the counselor to the working alliance between the client and the therapist have been investigated. The advent of computer analysis of discourse brought about content analytic approaches to transcribe therapy sessions (Holzer, Mergenthaler, Pokorny, Kachele, & Luborsky, 1996), used for such investigations as amount of primary and secondary process imagery in client discourse.

This cornucopia of research includes a variety of points of view, representing ratings from clients, therapists, and outside observers and at levels of analysis ranging from single utterances to episodes to relationships. Making the choice of which to use in a process and outcome research study is a difficult, complicated, multi-determined act and, whether admittedly or not, idiosyncratic. Research in this area becomes more difficult when analyzing a counseling relationship through one of several online environments, such as asynchronous email or synchronous chat. Many of the nonverbal measures are not present and one is left with transcripts, which are difficult to code and analyze, even in face-to-face conditions, and various satisfaction and outcome measures. Furthermore, there are logistical problems involved when connecting a counselor and a client in different locations, including state lines, time zones, and even countries, in an online environment, with the possible breakdown of the technology along the way. These issues should be considered as the focus now shifts to online counseling research.

Computer-Mediated Communication in Counseling

The innovation of the computer led to several new forms of communication, all with implications and applicability for the practice of counseling and psychotherapy. Computer-mediated communication (CMC) began to gain momentum in the 1960s, and can be defined as any type of communication between two or more individuals that is facilitated by computer hardware or software, with email being the most common form today (Kraut, Mukhoadhyay, Szczypula, Kiesler, & Scherlis, 1999; Walther & D'Addario, 2001) Current examples of CMC would include an email sent to a family member, a message posted on a professional listserv or bulletin board, a conversation with a friend in a chat room, or the use of a videophone and webcam to send a picture and sound to a friend.

Literature that evaluated the process or outcome of therapeutic contact between a counselor and a client has been included. Studies related to online support groups have also been included because the findings related to these studies are applicable to counseling psychologists. Specifically, studies have been organized into topic areas that concern the field of counseling psychology. First, studies that have investigated how individuals use computer-mediated communication to gain support will be discussed. Second, outcome research from online counseling studies will be reviewed, including client and clinician levels of satisfaction with new modes of treatment. Third, process research from online counseling studies will be reviewed to discuss the unique issues of delivering mental and behavioral health services without both parties being together in a face-to-face environment. These sections are organized to guide the reader through important components of the online counseling literature and connect current findings to core themes of counseling psychology.

Support

Counseling psychologists work to convey empathy and support to a client so that their strengths and coping abilities can be harnessed. Consistent with this notion, some researchers have suggested that one of the main benefits of the Internet may be that it can provide a way for individuals to connect with others and gain support and information (e.g., Barak, 1999; Zelvin & Speyer, 2004). This may be particularly true for individuals that feel isolated, as the Internet may be a way to receive social support, and learn new ways of handling problems. However, the question is whether online counseling can effectively accommodate the communication of therapeutic empathy and support without both parties being present in the same location.

The research has frequently investigated the use of online support groups, and typically found benefits for participants (e.g., Rochlen, Zack, & Speyer, 2004; Grohol, 2004). Online support groups consist of messages on discussion boards, which can be available 24 hours a day, and these support groups have been shown to have some benefits. For example, Braithwaite, Waldron, and Finn (1999) analyzed 1,472 social support postings from 42 unique members of a computer bulletin board for persons with disabilities. Social support messages were defined broadly as any posting that offered caring, belonging, esteem, or assistance to the recipient of the message. These messages were coded into five categories classified by Cutrona and Suhr (1992): information support, tangible assistance, esteem support, network support, and emotional support. Two independent coders were used to analyze the data, with interrater reliability of .76 after being corrected for chance agreement. The results found that the most common form of support offered by the members of the bulletin board was emotional support (40%), which was often in the form of understanding or

empathy, encouragement, or physical affection. An example of this emotional support was offered by a message that responded to a member's recent discouraging round of physical therapy: "I know! I just got my first symptoms on July 22nd and I still have problems when I move in certain ways" (p. 137).

Finn (1999) also investigated an online self-help group that focused on issues related to disability. An analysis of 718 messages from 42 unique users residing in 33 states was conducted. The researcher developed 14 categories for the messages; the categories were derived from the therapeutic self-help group mechanisms found in the group work literature (e.g., Katz & Maida, 1990) and on the social support categories developed by Cutrona and Suhr (1992). Two research assistants were used to code the messages, and reported a mean agreement of .82. Messages categorized as providing support and empathy (21.2%), providing information (15.3%), devoted to problem solving (14.4%), and expressions of feelings or catharsis (12.3%) were the most common on the bulletin board. Although the authors coded the messages into categories, it is unknown whether group members themselves perceived the messages as being emotionally supportive; however, messages on the bulletin board would often be posted in sequence, and the recipient's response would confirm that they felt supported. Future research should not only look to categorize messages posted to these types of computer bulletin boards, but should also strive to obtain outcome data from the participants to determine how the support conveyed is perceived and whether or not the support is effective.

Sharf (1997) analyzed messages posted to a listserv titled the Breast Cancer List (BCL). Listserves differ from computer bulletin boards in that an individual needs to first subscribe to the list in order to receive messages. Bulletin boards can typically be accessed

by anyone who finds the webpage that is hosting the messages. The exact membership of the group is continuously in flux because individuals can subscribe and unsubscribe at any time, but the author reported that the membership at the time of study exceeded 825 participants, with most members residing in the United States or Canada. The author became a “lurker” on the listserv, meaning that she did not actively participate in sending messages but viewed messages that were sent by other members. In other words, the author became a participant-observer to the listserv focused on breast cancer. Similar to other findings on online support groups, three main categories of messages were identified: information, social support, and personal empowerment.

Another study investigated an email group of parents of children with autism (Huws, Jones, & Ingledeu, 2001). An analysis of over 6,000 messages over a 3-month period, using the qualitative data analysis package, QSR Nud•ist (Gahan & Hannibal, 1998), indicated that individuals participating in the chat group were able to convey and gain a sense of interpersonal warmth through the use of the computer-mediated communication. The core category that emerged from the analysis of the messages was *making sense* of autism, which was composed of messages related to searching for meaning, adjusting to changes, providing support and encouragement, and narrative sharing of experiences. Similarly, a study conducted by Winzelberg (1997) focused on an electronic support group for individuals with eating disorders. The content of 306 messages posted on an eating disorders electronic support group was analyzed by two independent raters and coded into four categories: searching for meaning, adjusting to changes, providing support and encouragement, and narrative sharing of experiences. Members of the online group were found to use similar

helping strategies employed in face-to-face groups. The members provided emotional support, information, and feedback.

Finally, Bresnahan and Murray-Johnson (2002) analyzed over 2,000 messages drawn from an asynchronous women's health discussion group, which focused on issues related to menopause. The authors provide several examples of participants commenting on the social support they received from the discussion group. One woman wrote, "I know where you are coming from and I have a lot of empathy for you. It was really hard for my head to adjust to my changing body. I think informing yourself, being active, laughing, being positive and having support groups like this one really helps" (p. 405). The authors concluded that participating in an online support group could result in feeling supported and developing a sense of community with other group members.

One of the problems with these previous studies is that they have not included the guidance or support of a counseling psychologist or another type of trained practitioner. A professional can prevent some of the negative consequences of online support groups, such as the proliferation of misinformation, conflict among group members, and the possible development of Internet addiction (see Young, 1996; Young & Rogers, 1998). Hsiung (2000), however, studied an online self-help group that was monitored by a mental health professional. In an eight month period, the Psycho-Babble group (www.dr-bob.org/babble) had over 20,000 messages posted (an average of 94 per day) by over 1,500 members. Members of the message board indicated that the forum was effective in their efforts to educate themselves about various mental health and behavioral issues, as well as gain support. An examination of over 20,000 messages also provided evidence that the group was effective in terms of participants giving and gaining support for their mental health issues.

The study analyzed examples of messages and grouped them into categories, such as education, support, and feedback.

These studies of online support groups have not tested the effectiveness of online counseling directly; however, they provide some evidence that individuals can receive general support over the Internet. This research on online support groups has also demonstrated that consumers are willing to seek out help in an online environment, and online support groups may be a first step toward change for many people (Grohol, 2004). Of course, there are several limitations with studies of this type. First, the voyeuristic nature of the examination of the groups does not allow the research to confirm whether the categories that emerge in the messages were intended or interpreted in the same way by the participants of the online support groups. Second, since the individuals in the message group are not knowingly participating in a research study, it is impossible to obtain outcome or follow-up data other than what is available in the messages posted on the online support group. It may be that individuals who are comfortable with online communication gravitate to this form of support, and it may be that these groups are not beneficial to the entire population. Online counseling is not unique in this respect because face-to-face services are not uniformly effective for everyone and one size does not fit all. Initial evidence indicates that empathy can be conveyed through text-based computer-mediated communication between members of online support groups. Future research should examine if empathy from a counseling psychologist can be effectively conveyed and perceived through online counseling environments.

Outcome Research

The main goal of counseling is to alleviate the distress, anxiety, or concerns experienced by a client when they enter therapy in addition to building from a foundation of the client's strengths. As a result, it is important to directly examine whether online counseling is effective in reaching this goal. In this review of the literature, the researcher found studies which have directly examined the effectiveness of CMC technologies such as synchronous chat, asynchronous email, and videoconferencing for the delivery of online counseling and behavioral services. Cohen and Kerr (1998) assigned 24 undergraduate students to either one semi-structured session of face-to-face (FtF) counseling or one semi-structured session of computer-mediated communication (CMC) counseling that was delivered through synchronous chat by a graduate student in a counseling psychology program. Participants showed significant decreases in anxiety in both modes of treatment as measured by the State-Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970), with no difference in the level of change in the two modes. These results provided some initial support for the use of CMC in the delivery of mental health and behavioral services, but it should be noted that individuals with more severe presenting issues, such as major depression or substance abuse, were screened out of the study. It may be that the clients allowed to participate in the study were experiencing very little distress before the study, and thus CMC counseling may not have been equally as effective as FtF counseling for more severe clients. The low number of clients used may have also limited the ability of the researchers to find significant differences.

To address these issues Day and Schneider (2002) randomly assigned 80 clients, who volunteered to participate through numerous media and referral sources, to three modes of psychotherapy: face-to-face, videoconference, and 2-way audio. A wait-list group was also

used as a control condition in the study. The clients presented with a variety of issues, including weight issues and personality disorders. The most common problems reported by the clients were body image/weight, family relationships, other relationships, and work/school. Before treatment, clients in each condition had similar averages on the GAF, with each group having a mean GAF of either 69 or 70. The outcome measures included the Brief Symptom Inventory (BSI; Derogatis & Coons, 1993), GAF, Target Complaints method (TC; Battle et al., 1966), and modified versions of the Client and Therapist Satisfaction Scale (CSS and TSS, Tracey & Dundon, 1988). Sixteen doctoral students in a counseling psychology program were given training in cognitive-behavioral therapy (CBT) but were given flexibility in order to reproduce conditions similar to face-to-face therapy relationships. A MANOVA comparing the treatment groups to the control groups on outcome measures demonstrated the effectiveness of treatment over the control condition. Possible differences between the treatment groups were explored with a MANOVA on the set of outcome measures, and no significant differences were found among the three modes of therapy. The authors reported that “The similarities among the three treatment groups – face-to-face, video teleconference, and audio conference – came through more strongly than any differences” (p. 501).

In a series of studies, Glueckauf and colleagues (Hufford, Glueckauf, and Webb, 1999; Glueckauf, et al., 2002; Liss, Glueckauf, & Ecklund-Johnson, 2002) compared videoconferencing to face-to-face counseling for families with epileptic children. In one study, 39 teenagers with seizure disorders and their parents from the rural Midwest were randomly assigned to the following conditions: home-based family video-counseling or audio counseling through speakerphone, traditional office-based family counseling, or a wait-list

control condition. Six sessions with an integrative family therapy approach were provided to the participants in the study, and data was collected twice, 1 week and 6 months after the conclusion of treatment. A total of 29 families completed the counseling program after a total of 5 families dropped out after the initial interview; dropouts were usually in the office counseling group, which required long-distance travel for the participants. The outcome measures used in the study were problem-specific scales from the Family and Disability Assessment System (FDAS; Glueckauf, 2001; Glueckauf, 1992) and the Social Skills Rating System (SSRS; Gresham & Elliot, 1990). Process measures included a modified version of the Working Alliance Inventory (Horvath & Greenberg, 1989) and Homework Completion Ratings and Missed Appointments (Glueckauf et al., 2002). Across all treatment types, participants reported significant reductions in both severity and frequency of family problems as measured by the FDAS; mode of transmission did not affect the outcome of the treatment. The overall level of therapeutic alliance was moderately high across the three conditions, although teens' perceptions of this alliance were significantly higher in the office condition when compared to the videoconferencing condition; however, parents did not report significant differences in the alliance between modes of treatment. Also, no significant differences were found between groups on measures of treatment adherence. This study demonstrates the usefulness of videoconferencing in providing services to clients. These results are limited in their applicability to the most common types of online counseling (i.e., asynchronous email, synchronous chat) in which messages are typed back and forth between the client and therapist. Text-based modes of counseling do not allow as much information to be transmitted between parties, and future research should examine the differences between these modes of service delivery.

Wright and Chung (2001) in a review of the literature related to therapeutic writing suggested that therapeutic writing has been beneficial for those that perceive themselves as powerless, are not using their first language in face-to-face therapy, are silenced by shame or other inhibiting emotions and feel unable to speak, who need to disclose stressful or traumatic events, and those at particular stages of life (e.g., adolescents, hospice care patients) associated with experiencing strong feelings. Since text-based online counseling includes communicating through writing, this review is relevant to likely effectiveness of services provided through asynchronous email and synchronous chat. Online counseling may be able to work by utilizing this type of writing component. Directly examining the effects of writing through a computer, Lange and colleagues (2001) randomly assigned 25 undergraduate students who were experiencing posttraumatic stress to either a computer-based treatment group or a waiting-list control condition. The computer-based treatment was composed of bi-weekly writing sessions over a 10-week period-of-time. During the 45-minute writing exercises, one of seven graduate students in clinical psychology responded to people's writings halfway through the sessions.

Results from the study demonstrated that the participants in the computer-based writing treatment showed larger reductions in posttraumatic stress symptoms than participants in the control group as measured by Impact of Events Scale (IES; Horowitz et al., 1979), the anxiety, depression, somatization and sleeping problems subscales of the SCL-90; Derogatis, 1977) and the Profile of Mood States (POMS; Wald & Mellengergh, 1990). These results remained stable six weeks after the conclusion of the treatment. Limitations of the study include the fact that the participants were college students who received extra credit for their participation. As a result, the findings may not be generalizable to general or clinical

populations. Although there was a follow-up at six weeks, future research should evaluate the effects of online counseling over a longer period of time to determine the long-term effects.

Two other studies, generating mixed results, have also examined the effectiveness of online counseling for group work. Meier (2000) investigated the effectiveness of an online support group for practicing masters-level social workers to discuss stress related to their jobs. Fifty-two participants were randomly assigned to the online intervention group over a discussion listserv or a no-treatment control group. Participants completed the standardized Occupational Stress Inventory (OSI; Osipow & Spokane, 1987) before and after the intervention. A group leader facilitated the discussions, which included encouraging members to explore their work-related stress in more depth, raising new concerns, and trying to enhance the experience for the members to increase their satisfaction with the group. While members of the group expressed satisfaction with the experience, they did not experience any significant changes in their levels of occupational stress, psychological strain, or coping resources. The authors suggested that the small sample size and “weak intervention” (p. 259) did not allow for the detection of differences. In addition, the participants included in the study may have only been experiencing mild levels of stress.

In turn, however, Hopps, Pepin, and Boisvert (2003), found evidence for the potential usefulness of goal-oriented cognitive-behavioral therapy delivered through synchronous chat to 19 individuals suffering from chronic physical disabilities. Using a pretest-posttest design with a waiting-list control group, they found that participants reported less loneliness at posttest when compared to the control group. In the study, loneliness was measured with a French translation of the University of California at Los Angeles Loneliness Scale (UCLA-L; Russell, Peplau, & Cutrona, 1980), Emotional Versus Social Loneliness questionnaire (ESL;

Russell, Cutrona, Rose, & Yurko, 1984), and personal definitions of loneliness. The participants maintained the reduction in loneliness at a four-month follow-up. A main limitation of the study noted by the authors is that the sample was relatively homogeneous and may not represent all people with physical disabilities. Specifically, participants in the study were most likely more educated, independent, and less impaired than the general population of individuals with physical disabilities. In addition to this limitation, the sample size was very small as groups were comprised of only 9 or 10 participants.

The findings from studies that have evaluated the outcomes of online counseling have been mostly positive with studies reporting significant client improvement (Day and Schneider, 2002; Cohen & Kerr, 1998; Glueckauf et al., 2002; Hopps et al., 2003; Lange et al., 2002). The one study that did not find significant client improvement hypothesized that the lack of improvement was due to the weak intervention that was used as a treatment (Meier, 2000). Taken as a whole, these studies provide preliminary evidence that online modes of counseling can be effective in reducing clients' presenting problems. As a result, these findings provide the foundation for future research to determine whether or not online counseling is a viable treatment option for counseling psychologists and their clientele.

One of the most important questions that pertain to the effectiveness of online counseling is who would most benefit from online counseling services and who may most likely be harmed. Of course, one of the most fundamental ethical responsibilities is to cause no harm, and a goal of counseling psychology is to offer services to individuals who are progressing through developmental challenges rather than a more disturbed or severe population (Gelso & Fretz, 2000). It is believed that online counseling would benefit individuals who are functioning at a moderately high level (e.g., Stofle, 2001; Suler, 2001).

For example, individuals that have more severe issues that require close attention and supervision may be better served through traditional FtF methods. Specific populations that fall under this heading might include clients who express suicidal ideation, reveal a recent psychotic episode, or admit to substance abuse (Suler, 2001; Zelvin & Speyer, 2004).

Research is also needed to pinpoint the types of therapies that work best online for clients with certain presenting issues. At the present time, research shows that supportive treatments are effective to some degree. It is also possible that short-term interventions with a cognitive-behavioral focus would be more effective than long-term psychoanalytic interventions. The structured approach of cognitive-behavioral treatments would appear to function well within the confines of online counseling. However, future research should directly test this hypothesis. Day and Schneider (2002), for example, trained clinicians by using standard CBT psychoeducational dialogues, materials such as daily graphs and ABCD charts for negative events (Activation, Belief, Consequence, and Disputation). Future research efforts could train clinicians in various therapy models to compare their effectiveness in new modes of service delivery.

In addition, counseling psychology has also been at the forefront of studying academic decisions and providing career counseling services. Vocational counselors have already infused technology into their services by often directing clients to computer-assisted programs for career exploration. Clients are commonly referred to the computer-based career guidance program DISCOVER (Rayman & Harris-Bowlsbey, 1977) or SIGI PLUS (Norris, Shatkin, & Katz, 1991) to investigate career options and facilitate their career exploration process. For instance, there are numerous resources now available online for career development, that clients can find 24 hours a day, including interactive career decision-

making activities and the Occupational Outlook Handbook (<http://stats.bls.gov/oco>).

Counseling psychologists are well trained to assist in the development of Internet sites, which can be used at times when face-to-face professionals are less likely to be available. We are thus able to educate the public about various mental health issues and to assess the impact of these education and training efforts.

Finally, core components of counseling psychology including wellness and prevention are aptly targeted on internet sites. Online self-help services provided and moderated by trained professionals can supplement other self-help materials. For an example of an online self-help website, visit MySelfHelp.com (www.myselfhelp.com). Counseling psychologists can refer their clients to psychoeducational resources as well as online bulletin boards that provide answers and support for a variety of issues. Clients or users must pay \$15/month in order to access the materials on the website. Currently, MySelfHelp.com has not provided any empirical data to indicate the effectiveness of the self-help materials, and it is unclear whether these types of online resources would be more effective than common self-help resources offered during face-to-face treatment.

Satisfaction

Traditionally, outcome research on a new intervention is conducted by comparing the new treatment to a no-treatment control or to an already established intervention. Thus, the effectiveness of online counseling is established by comparing the relative changes in client symptoms after participating in online counseling versus individuals who were not treated or treated in face-to-face counseling. It also important to measure clients' satisfaction with services because they are ultimately the individuals that do or do not benefit from services provided by counseling psychologists. The Consumer Reports (CR) study by Seligman

(1995), for example, gathered nearly 3,000 participants to respond to 26 questions, which focused on the participants' experiences with mental health professionals. These questions were organized into three subscales: specific improvement, satisfaction, and global improvement. Overall, participants reported that treatment from a mental health professional resulted in feeling better. Attempts by counseling psychologists to investigate online counseling should include measures of efficacy and satisfaction to develop a full picture of the potential effectiveness of online counseling.

Several studies have examined the satisfaction of clients with CMC services. In one of the first studies examining distance technologies, videoconferencing was examined as a potential way for professionals to work with psychiatric patients (Dongier, Tempier, Lalinec-Michaud, & Meuneir, 1986). In this study, 50 patients underwent a closed-circuit TV (CCTV) interview, and they were compared to 35 matched controls who received a face-to-face interview, which was conducted by a psychiatrist. All of the participants were asked to rate various aspects of the interview, such as feeling of ease during the interview, ability to express themselves, quality of interpersonal relationship, and the utility of the assessment interview. No significant differences were found in clients' satisfaction rating between the videoconference (CCTV) and face-to-face condition; however, the psychiatrists in the study rated the CCTV condition as significantly inferior in regard to the usefulness of the interview. The authors interpreted the results as demonstrating that professionals, such as counseling psychologists, may be more critical of new modes of treatment and service delivery than clients.

Stevens and colleagues (1999) analyzed general psychiatric assessments conducted by psychiatrists through either face-to-face or videoconferencing. Forty clients were first

diagnosed using the DSM-III-R and randomly assigned to a face-to-face or videoconferencing condition. Five psychiatrists, blind to the initial diagnosis, performed the assessments. Client and psychiatrists were asked to complete the California Psychotherapy Alliance Scale (Marmar et al., 1986) and the Interview Satisfaction Scale, a 12-item measure developed by the authors. No significant differences were found between the face-to-face and online conditions for the client or psychiatrist on the California Psychotherapy Alliance Scale or for the client on the Interview Satisfaction Scale. A significant difference was found on the Interview Satisfaction Scale, with psychiatrists reporting less satisfaction in the videoconferencing group than in the face-to-face group.

Videoconference technology has also been used to conduct neuropsychological assessment interviews. Schopp, Johnstone, and Merrell (2000) randomly assigned 98 participants with a wide range of neuropsychological problems to two modes of evaluation: videoconferencing or face-to-face interaction. Nine interviewers were used in the study, including 4 neuropsychologists, 3 neuropsychology postdoctoral fellows, and 2 neuropsychology interns. Interviewers and clients rated their satisfaction, how relaxed or stressed they felt, ease of communication, perceived caring on the part of the interviewer, and whether or not they would repeat the experience. No significant differences were found between the conditions on measures of client satisfaction, ease of communication, and level of relaxation during the interview. In fact, clients in this study reported a greater willingness to repeat the experience in the videoconferencing condition than the face-to-face condition; however, interviewers expressed significantly lower satisfaction with the videoconferencing condition than the face-to-face condition. Again, it appears that professionals are less likely to accept new modes of treatment. Professionals may not accept new modes of treatment

because they possess knowledge and training in the effectiveness of traditional treatments; however, Day and Schneider (2000) found that therapists' level of comfort increased with counseling delivered through videoconferencing over time. Clients, on the other hand, may simply appreciate the services provided and may not scrutinize outcomes in a similar manner as professionals. The possible disparity between clients' desire for and acceptance of online counseling and professionals' lack of acceptance of online counseling should be investigated.

In another example, videoconferencing technology was used by correctional psychologists to consult with prison inmates. Seventy-five inmates reported that they were satisfied with various aspects of the online consultation process and were willing to return for a follow-up to the consultation on a six-item questionnaire that was developed by the authors (Magaletta, Fagan, & Peyrot, 2000). Furthermore, inmates with more severe pathology still reported they were satisfied with the process, although some problems did arise when inmates became angry or frustrated. At times, the early signs of frustration and anger were not readily apparent to the psychiatrist because of the slow transmission speed and low resolution of the technology. The authors stressed the importance of audio quality during videoconferencing sessions, and suggested that future research and practice should use more advanced technologies. A limitation of this study is that the attitudes of the psychologists in the study were not evaluated. As previously mentioned, psychologists' attitudes and satisfaction with online mode of treatment may not be as forgiving as clients', and this disparity may lead to negative therapeutic outcomes in long-term treatment. Also, the six-item measure created for the study by the authors was acknowledged as being simplistic, and future research should use more rigorous measures to evaluate the overall satisfaction with online modes of treatment.

These studies show a similarity between the satisfaction ratings of those who participated in a videoconferencing versus a face-to-face session. Videoconferencing, where you can see and hear the other person, is more similar to face-to-face than other forms of CMC that rely on synchronous chat. The studies looking at text-based online counseling provide mixed results. For example, two studies have examined the satisfaction members have with online group counseling and found different results. A study by Meier (2000) investigated an online support group for stress related to their jobs. The group members (fifty-two masters-level social workers) reported a high level of satisfaction with the overall experience in the group, as well as the group leader's presence, and range of topics discussed during the group. These variables were assessed by an 83-item satisfaction survey that was designed by the author. Members also commented that they enjoyed the convenience and privacy of being able to participate from home. The author noted that most of the sample (95%) reported having good to excellent computer and Internet skills, perhaps accounting for their acceptance of the online group.

The second study by Sander (1996) examined couples' group therapy, which shifted from sessions held in an office to sessions conducted from home through synchronous chat. The shift in mode of treatment was initiated after several couples could not attend face-to-face sessions because of child care conflicts. The participants in the study reported less satisfaction with the chat sessions compared to their previous face-to-face encounters, suggesting that clients from an established face-to-face setting placed into an online environment could downgrade the quality of the relationships. The therapist in the study also expressed his frustration with the text-based mode of treatment, which may have been communicated to the clients, perhaps in turn making them more negative about the process.

The author acknowledges that his efforts to transport his face-to-face counseling group to an online environment were characterized by “clumsiness and disjointedness” (p. 309).

Although the report is mostly negative in terms of the usefulness of online couples’ group therapy, the author predicted that it is likely that the practice of online mental health and behavioral services will increase and become less cumbersome in the future as technology advances.

In line with this last study, Rochlen, Brevatas, and Zack (in press) suggested that when presented with a choice people may prefer face-to-face treatments. In an instrument development project of comparable measures of online and face-to-face counseling attitudes, Rochlen and colleagues found that participants expressed more favorable attitudes toward face-to-face counseling than online counseling in regard to perceived value and level of discomfort. The primary limitation of the study is that it was an attitude comparison study, and attitudes might be based on familiarity and expectations, particularly since these were general college students and not actual clients or individuals currently experiencing distress. Yet, this research finding suggests that the implementation of online counseling services may need to pay particular attention to potential client attitudes and comfort levels with computers and distance communication.

Although the last study was not technically an outcome study, it merits mention because it assesses potential clients’ interest level in online counseling. The research could be considered a pre-process study because it measures attitudes and expectations about treatment. The study also serves as a bridge to begin discussing the literature that has investigated the process of online counseling. Thus far, outcome studies have demonstrated that forms of online counseling are perceived as satisfactory and useful by client self-reports

and found to reduce symptoms. The next section will discuss the process research that has been conducted so far on online counseling.

Process Research

While studies have started to examine the outcomes of online counseling, there have been fewer studies that have attempted to measure process variables. This is an important omission, as one of the most significant challenges for online counseling is whether it is possible to connect with a client in a meaningful way through distance communication technologies. Without the benefit of contextual and nonverbal cues, the therapeutic alliance might be significantly hampered, and it might be difficult for the client and counselor to really explore the person-environment interactions since they are not in the same location. This could be problematic, as the therapeutic alliance is one of the critical factors related to the efficacy of counseling (Gaston, Piper, Debbane, Bienvenu, & Garant, 1994; Gelso & Carter, 1994; Hartley & Strupp; Horvath & Luborsky, 1993; Krupnick et al., 1996; Robbins, 1992; Wampold, 2000) and if a therapeutic alliance cannot be formed through CMC, then it is unlikely that online counseling would be efficacious for most clients. Yet, only three studies have attempted to examine the type of relationship or therapeutic alliance that can be formed during online counseling. These three studies have produced mixed results. In one of the previously mentioned studies by Hufford et al. (1999), in which videoconferencing was compared to FtF counseling for families with epileptic teens, the teens in the videoconference condition reported significantly lower alliance levels than reported by the teens in the FtF condition. This is interesting because it may be expected for younger individuals to more readily accept new technologies. In turn, though, participants in the study mentioned by Cohen and Kerr (1998) provided similar ratings between the CMC and FtF condition in

counselor's expertness, attractiveness, and trustworthiness as measured by the Counselor Rating Form (Barak & LaCrosse, 1975). These findings are notable given possible concerns that clients in the CMC would rate their counselors lower due to lack of visual or nonverbal cues to use in their judgments. Participants also responded to the Session Evaluation Questionnaire (Stiles & Snow, 1984) to rate the depth, smoothness, positivity, and arousal of the counseling sessions. Participants expressed higher levels of arousal in the FtF condition and there were no other significant differences between groups.

Other research has shown that a working alliance can be adequately established during online counseling (Cook & Doyle, 2002). Differences in the client ratings of the working alliance from 15 online therapy clients were compared from normative data from a comparable face-to-face counseling sample. The 15 participants in the study completed at least three counseling sessions, which were conducted either through asynchronous email or synchronous chat. The findings were that clients participated more in the distance modes and had equivalent working alliances with their counselors as measured by the Working Alliance Inventory (Horvath & Greenberg, 1989), over periods of five contacts. This study is limited because it did not have a strict face-to-face comparison group and was comprised of a small sample. Future studies should include larger samples of participants and randomly assign to an online, face-to-face, or control group. Studies of this type will give the field of counseling psychology more specific answers related to the process and outcome of online counseling.

The process of online counseling needs to be explored in future research. For example, it would be useful to directly examine how the absence of verbal and nonverbal cues, such as speech, clothing, skin color, and appearance, changes the dynamics of the session (Mallen, 2004). It is possible that clients might dislike the treatment because

counselors miss important social and cultural aspects of the presenting problem and the relationship because only typewritten messages are transmitted during the sessions (Mallen, 2004; Zack, & Speyer, 2004). Culturally sensitive counselors may be able to inquire about these issues online in the same way as in FtF therapy; however, the potential for misunderstandings is present. One example of the potential for increased problems is that common stereotypes may be more likely to be used without the presence of nonverbal cues. Preliminary research has found differences in the way counselors approach male and female clients. In a study by Mallen and Vogel (2002), counselors conducted an online session through synchronous chat with a client whom they thought was genuine; the client was a confederate in the study. Information about the client's background and presenting issues were standardized so that each counselor met with the same client. The only difference was that counselors were randomly assigned to have a male client or a female client, while the rest of the identifying information was kept constant. Counselors in the study reported that they were significantly more satisfied with the female client, and assessed the male client as being significantly more hostile and proud. With the lack of nonverbal cues, counselors and clients may fill in the blanks with stereotypes or idealized versions of their online partner. Future research should investigate the likelihood and implications of this process.

Future research may also need to further examine the types of messages that are exchanged in online counseling. One study mentioned previously (i.e., Meier, 2000), investigating the feasibility of an online support group for practicing masters-level social workers to discuss stress related to their jobs also started to examine specific process variables that occur between members of an online group. Qualitative analysis of 209 comments made by members throughout the life of the group found that 54% of the

comments offered emotional support and validation, 29% expressed encouragement, and 17% offered advice or information. Although the listserv could have stunted emotional communication and led to a question-answer cycle, members of the group chose to mainly offer emotional support to other group members. But, we know little about what transpired between a counselor and a client or clients.

Summary

Currently, there are many unanswered questions regarding online counseling. Furthering the quality and quantity of research in this area should provide critical information on the positive and negative dynamics of online counseling. At this point, research regarding online counseling suggests some potential uses of online counseling. Yet, research is needed to directly examine differences across various process and outcome variables between face-to-face and online counseling conditions. In addition, some potential limitations exist, including issues related to the therapeutic alliance, who is most appropriate for online treatment, the ability to intervene during a crisis, and the lack of nonverbal cues. These limitations need to be directly addressed in the research literature. Specifically, future research efforts should investigate elements of process and outcome that have already been explored in face-to-face modes of treatment. Common factors of effective face-to-face counseling have been identified (Wampold, 2000), and these factors should be examined to see the degree to which they are present during an online counseling session. Preliminary research has suggested that these important common factors can be achieved in online counseling (Day & Schneider, 2002; Cook & Doyle, 2002), but future research efforts are needed to continue to specify what effect the unique aspects of online counseling, such as the effects of working with clients without the assistance of nonverbal cues, has on the process.

For instance, research on the therapeutic alliance, which is one of the critical factors related to process and outcome in counseling (Bachelor, 1991; Eckert, 1993; Henry, Strupp, Schacht, & Gaston, 1994; Horvath & Symonds, 1991) is crucial. If a therapeutic alliance can be formed through CMC, then it is likely that online counseling may be efficacious for certain clients. In an online environment, however, it will require researchers to determine the best way to measure a therapeutic alliance in the absence of traditional face-to-face cues. Since process and outcome research has a long history in the field of counseling psychology, it seems natural that counseling psychologists would be involved in evaluating new modes of treatment.

Relating Computer-Mediated Communication Literature to Online Counseling

The field of psychology, especially practitioners interested in online applications, could benefit from studying existing literature in the domain of computer-mediated communication (CMC). There is already a long line of research investigating differences between face-to-face and online environments on a wide variety of variables. For instance, research has already shown that face-to-face discussions preceded by synchronous chat or asynchronous email are perceived as more enjoyable and include a greater diversity of perspectives than face-to-face discussions not preceded by a form of computer-mediated communication (Dietz-Uhler & Bishop-Clark, 2001). The possible implications for online counseling are striking. Potentially, the future of online counseling resides in a mixture of modes in the treatment of clients. For example, counselors may meet with a client in a traditional face-to-face session twice a month and meet through synchronous chat twice a month. A client that seeks therapy for the first time in an online environment may be opening the door to further counseling in the more traditional face-to-face setting. The existing

literature in the computer-mediated communication vantage point can lead future research in the right directions.

There are several lively debates in the computer-mediated communication literature, such as the level of self-disclosure that occurs in an online environment, which could be helpful to those interested in online counseling. For example, it has already been demonstrated that computer-mediated communication is often more uninhibited and contains more disclosures of personal information than face-to-face communication (Sproull & Kiesler, 1986; Kiesler, Siegel, & McGuire, 1984); however, in a study of face-to-face and synchronous chat conversations, it was found that participants in the face-to-face groups felt they disclosed more personal information and that their partner disclosed more information (Mallen, Day, & Green, 2003). The debate continues about the nature of self-disclosure and how the available anonymity in computer-mediated communication affects openness. Future researchers should investigate the possible differences as they pertain to a client's willingness to disclose information about their background or presenting problems. If computer-mediated communication does indeed foster greater self-disclosure on the part of the client, it would appear helpful to hold sessions in an online environment from time to time, even if the main mode of treatment remains in the face-to-face realm.

The initial reaction to the possible applications of online communication by many established in the field of psychology was that the nature of the technology could not possibly allow enough social cues to be exchanged in order to establish meaningful relationships. The social information processing theory states, "The critical difference between FtF and CMC . . . is a question of rate, not capability" (Walther, 1995, p. 190). In a long line of research, Walther (1993) points out a critical flaw in existing literature

comparing face-to-face and computer-mediated communication, stating that many studies do not allow a significant amount of time for online communication to develop. The key difference may be that the rate of relationship building and impression formation is affected by the differences in computer-mediated communication and face-to-face communication. Computer-mediated communication groups have been shown to grow over time to similar relational levels of face-to-face groups on these variables. It has also been demonstrated that there are times when computer-mediated communication actually surpasses normal face-to-face communication, labeled *hyperpersonal* communication. “When users even so much as expect to have a long-term association, CMC is no less personal than FtF ” (Walther, 1996, p. 33).

Research comparing computer-mediated communication and face-to-face communication has examined team decision making and group process (Adrianson & Hjelmquist, 1991; Barkhi, Jacob, & Pirkul, 1999; Olaniran, 1996; Thompson & Coovert, 2002), electronic negotiation (Croson, 1999), student learning (Ocker & Yaverbaum, 1999), work meetings (Lantz, 2001), and focus groups (Schneider, Kerwin, Frechtling, & Vivari, 2002), just to name a few areas of study. The literature provides a mixture of findings with computer-mediated communication prevailing over face-to-face in some instances, not performing as well in other studies, and no differences between the modes of communication are also found at times. Although the literature in computer-mediated communication is still developing, the field of psychology can build upon this research and use existing data to drive research on computer-mediated counseling.

Contribution to the Literature

The current study adds to the existing research by providing new pieces of data to the growing knowledge base related to clinical applications of computer-mediated communication technologies. The focus of the study is on therapist reactions to conducting a counseling session in an online environment. First, therapists' attitudes about online counseling will be measured before and after they conduct synchronous chat sessions with clients. This data contributes to the knowledge base of how therapists respond to working with clients in an online environment. Second, therapist responses were coded and analyzed to provide information about the intervention styles used most frequently in online counseling relationships. Third, data from the current study provides insight into the therapists' level of closeness, satisfaction, and feelings of alliance with the client in an online setting. Fourth, data from the study offers more information about the diagnostic capabilities of therapists as they work with a client without the aid of nonverbal cues in a synchronous chat environment. The design and data collected in this study is unique, and contributes to the growing body of research on online counseling.

METHODS

Participants

Fifty-four therapists-in-training (42 female, 12 male) with a mean age of 27.33 ($SD = 4.17$) were recruited from graduate programs. Training directors of psychology graduate programs across the United States were contacted and asked to notify their students of a research opportunity related to online counseling. Seventy-four APA accredited Counseling Psychology programs were contacted to encourage their students to participate in the study. Of the Counseling Psychology programs contacted, students from 18 programs (24%) participated in the study. The majority of the participants were from programs focused on counseling psychology (72.2%), followed by educational psychology (13%), marriage and family therapy (11.1%), and clinical psychology (3.7%). Participants were predominantly White (81.5%), followed by Asian (11.2%), Latino (3.7%), Arab (1.7%), and African American (1.7%). The majority of students (72%) attended universities in the Midwest region, and most participants were working toward a Ph.D. (75.9%), with the remaining working toward either an M.A. or an M.S. degree. Over half of the participants (57.4%) involved in the study had not used synchronous online communication (i.e., instant messaging) before the study was conducted.

Design

The goal of the experiment was to create a situation where the therapists-in-training would feel as if they were in a therapy session with a real client. In order to fulfill this goal, the researcher used deception before the study. Participants were informed that they would be meeting with a real client that was screened by the experiment team for inclusion in the study. Although guidelines have been proposed for who should and should not be included in

online counseling (Suler, 2001), ethical dilemmas (see Sampson, 1998; Shapiro & Schulman, 1996; Lloyd, 1996; Stricker, 1996; Brown, 1998; Stein, 1997; Jerome, DeLeon, James, et al., 2000) were alleviated by using a confederate to perform the role of the client. For the client, a character vignette (see Appendix A) was created and trained confederates played the role of the vignette.

Confederates were four advanced undergraduate students majoring in psychology. In return for their work on the study, confederates were given research credit, which they could apply toward their degree in psychology. The confederates were trained to perform the role of the client by first viewing two videotapes of genuine therapy sessions, which demonstrated how a real client behaves during a therapy session. Confederates were trained to present symptoms from specific diagnoses listed in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*: Major Depressive Episode, Generalized Anxiety Disorder, or Adjustment Disorder with Mixed Anxiety and Depressed Mood. They then acted out the role of the client using the character vignettes in at least three practice sessions with the researcher. After each practice session, the confederate was given a critique of their performance to increase their believability during the session. Finally, the team of four confederates met to discuss their performances and the nuances in the characters they had to play for the study. Differences in response styles were discussed, and confederates continued to work toward uniform responses to various therapist inquiries and techniques. Confederates were fully crossed into each condition in the current study, and portrayed a male client if they were male, and a female client if they were female. Between watching tapes, roleplaying sessions with the researcher, and meeting to discuss the case vignettes, confederates trained for over 15 hours before acting as a client in the study.

Procedure

Participants were recruited through an email announcement. Before students were contacted, approval was first requested through each graduate program training director. Training directors were asked to allow the researcher to contact students from the program to participate in the research project; this announcement can be viewed in Appendix B. The announcement stated that the research study was approved by the Institutional Review Board of the researcher's university. Before the study, participants were given an informed consent statement, sent through email, which was signed and returned through a fax machine. Participants then completed the 7-item *Opinions Concerning Mode of Therapy* (OCMT) questionnaire, which was sent and returned through email. Participants were then scheduled to meet with their client. At the scheduled time, they were met by the experimenter (i.e., the author), online through America On-Line Instant Messenger (AIM, Version 4.8), and led through the use of the instant messaging program. Participants were then given basic information about the client they would be meeting, which consisted of the client's name, age, year in college, major, and race/ethnicity. Participants were randomly assigned to see either a female or male client and to see a client who was experiencing anxiety, depression, or a mixed case featuring adjustment issues with a mixture of anxiety and depression.

Participants were instructed to carry out a single counseling session with the client, to take 45-50 minutes with the session, and then wait for the experimenter to come back into the room to wrap up the study. At the conclusion of the therapy session, participants were asked to complete questions regarding their synchronous online communication (chat) experience, their relationship with the client, their assessment of the client, and their opinions about the mode of therapy. A transcript of the session was also saved for analysis. The transcripts were

kept in a secure room and locked file cabinet, which was only accessible to the experimenter. Last, participants were given a debriefing statement (see Appendix C), detailing the nature of the study, including the deception that was used. Time was taken to discuss the deception used to make certain that participants did not leave the study feeling distressed. No participants reported feeling discomfort after discussing the nature of the study. Participants were paid \$10 for participating in the experiment.

Coding

At the conclusion of the session, a transcript was saved. Two coders were then trained to code the transcripts using the Counselor Response System (Hill, 1978; Hill & O'Brien, 1999). The Counselor Response System consists of 11 categories: 1) approval and reassurance, 2) closed questions, 3) open questions, 4) restatement, 5) reflection of feelings, 6) challenge, 7) interpretation, 8) self-disclosure, 9) immediacy, 10) information, 11) direct guidance, and 12) other. Each comment sent by the participant in the transcripts was categorized using the taxonomy and a total was computed for each therapy session. In other words, every comment that the therapist-in-training typed out and then sent by clicking on the Send button was coded. The coders for the study were two upper level undergraduate students majoring in psychology. Coders were trained by practicing on sample synchronous chat session transcripts not used in the study. Coders rated the transcripts independently at first, and then met in a group to discuss discrepancies and form a consensus. Coders continued to practice and refine their methods until they consistently reached an average of matching at least 80% of the time within each transcript. After the coders consistently achieved this goal, they began to rate the transcripts used in this study ($N = 54$). Coders spent over 20 hours training to successful use the Counselor Response System before rating

transcripts from the current study. The coders continued to meet for one hour weekly to discuss differences in ratings and work towards consensus.

Kappa results are reported from 35% of the transcripts coded in the study and can be viewed in Table 1. The kappas indicate how likely each coder matched on the total number of response types. For example, coders were extremely likely to code the same number of closed ($k = .981$) and open questions ($k = .968$) within each transcript. After practice, the criteria for categorizing open and closed questions became very clear for the coders, and they were able to reach almost uniform coding within the transcripts. Categories such as reflection ($k = .760$), restatement ($k = .774$), and self-disclosure ($k = .862$) were less concrete than the open and closed question interventions. As a result, the coders had a lower likelihood to match on these categories; however, their level of agreement is still acceptable. Three categories were affected by a limited range because those responses were not used often enough by counselors. Challenges, interpretations, and direct guidance were rarely used by counselors, which resulted in scores of 0 for the total number of responses in many transcripts. The lowest level of agreement was found for challenges, but the most common total for the number of challenges in a session reported by the two coders was 0. The number of challenges scored only ranged from 0 to 6 in the transcripts, so slight disagreements may have skewed the kappa values. Since the problematic levels of agreement between the coders related to responses that were rarely used by the counselors in the study, the overall level of matching between the coders is believed to be acceptable.

Measures

Relationship with Client

The Inclusion of Other in the Self Scale (IOS; Aron, Aron, & Smollan, 1992) was used to assess the amount of closeness that was established with the client during the therapy session. The IOS asks participants to select one of seven sets of interlocking circles that graphically represent the degree of closeness they feel with another individual. Circles that overlap to a greater degree indicate a relationship that is felt to be closer. Circles that overlap less represent less closeness. Reliability estimates have shown the IOS to have excellent test-retest reliability, with *rs* ranging from .83 to .85 over a 2-week period, and the IOS has strong correlations with other measures of interpersonal closeness, including the Relationship Closeness Inventory (Berscheid et al, 1989). The IOS has been used to demonstrate the importance of task type in developing close relationships (Aron, Melinat, Aron, Vallone, & Bator, 1997). The scale has also been shown to correlate significantly with the amount of cooperation in group decision-making (De Cremer & Stouten, 2003), and may be an effective measure in cross-cultural research because of its graphical or pictorial nature, which is less susceptible to being lost in translation (Li, 2002).

Assessment

Participants were asked to provide a preliminary Axis I diagnosis using the Diagnostic and Statistical Manual of Mental Disorder, Fourth Edition, Text Revision (*DSM-IV-TR*; American Psychiatric Association, 2000). This question is included to determine if participants can accurately diagnoses the client's presenting concerns. Clinical diagnosing has been found to be critical to developing successful treatment plans with clients (Stout, 1991). The DSM has been developed over the years to provide a reliable diagnostic classification system, and has been shown to be more accurate than other systems of classification (Malt, 1986; Morgan, et al., 2000).

Positive and Negative Affect

The Positive and Negative Affect Scale (PANAS; Watson, Clark, and Tellegen, 1988) consists of two 10-item scales, which assess the participants' level of positive and negative affect. Positive items include "enthusiastic," "attentive," and "excited." Negative items include "upset," "irritable," and "distressed." Participants were asked to indicate to what extent each item describes them, using a five-point scale ranging from (1) "very slightly or not at all" to (5) "extremely." The PANAS has been implemented as a general model for assessing (a) emotional states (i.e., transitory or changeable mood or affect) and (b) more stable individual emotional characteristics (Mehrabian, 1997). Participants completed the PANAS by filling in how they thought their client was feeling during the therapy session. Participants also completed a PANAS to describe how they were feeling during the therapy session. Thus, the PANAS is used to measure the level of positive and negative emotion experienced by the counselor during the online counseling session, as well as the counselor's assessment of the client's emotion during the online counseling session.

Earlier research has shown that the positive and negative affect scales are minimally correlated (Watson et al., 1988; Winter & Kupier, 1997). Cronbach alphas for the Positive Affect ($r = .89$) and Negative Affect ($r = .87$) scales have shown strong internal consistency. The PANAS has shown good criterion validity with other measures of affect (Watson, et al., 1988). For example, in a sample of psychiatric inpatients the Positive Affect scale to be positively correlated with measures of sociability and the Negative Affect scale was negatively correlated with mental health (Kuiper, McKee, Kazarian, & Olinger, 2000). In the current study, Cronbach alphas for the counselors' ratings of their own Positive and Negative Affect were .82 and .68, respectively. Cronbach alphas for the counselors' rating of the

client's Positive and Negative Affect were .79 and .75, respectively. The two forms of the PANAS were counterbalanced to determine if there were any sequence effects in the data. No significant sequence effects were found in the PANAS measures.

Opinions Concerning Mode of Therapy

The 7-item *Opinions Concerning Mode of Therapy* (OCMT) was developed by the author and can be seen in Appendix D. Participants were asked questions about their overall impressions of the synchronous chat mode of therapy before and then after the therapy session occurred. Before and after the session, the questions were the same except the tense was changed from past to future. The participants were asked to respond on a six-point Likert scale ranging from (1) "strongly disagree" to (6) "strongly agree." The scale was separated into four subscales, *Time Management*, *Therapeutic Alliance*, *Enjoyment and Desire for Training*, and *Quality of Care*. The *Time Management* subscale consisted of two questions that evaluated attitudes related to how much work participants felt they could accomplish with their client in an online environment in comparison to a typical face-to-face session. The *Therapeutic Alliance* subscale consisted of two questions that evaluated attitudes related to the possibility of forming a working alliance and therapeutic relationship with their client in an online setting in comparison to a face-to-face setting. The *Enjoyment & Desire for Training* subscale consisted of two questions that gauged how much the participant thought they would enjoy the experience as well as their desire for future training in the area of online counseling. The *Quality of Care* subscale consisted of a single question that evaluated how participants felt about the quality of online counseling in comparison to face-to-face counseling.

Satisfaction

Participants were asked to rate how satisfied they were with the therapy session using a six-point scale ranging from (1) representing “not at all satisfied” and (6) representing “extremely satisfied.”

Demographic Information

Participants reported sex, age, race/ethnicity, training program affiliation, degree expected, and year in school. Previous clinical experience was also assessed by asking participants to respond in months to the question, "How much clinical experience do you have? Please approximate by the number of months." Finally, three questions were used to assess the amount of synchronous online communication experience participants had before the experiment. The questions were: (1) “How many online chat partners do you currently communicate with on a regular basis?”; (2) “How many hours per week do you spend using online chat?”; and (3) “How many hours per week do you spend using email?”.

RESULTS

Preliminary Analysis

The goal of the study was to answer the research questions related to how therapists-in-training would respond to conducting a therapy session in a synchronous chat environment. The study used confederates to portray the clients, so tests were performed to determine if the therapists-in-training responded differently to each confederate. It was important to ensure that therapists-in-training were not exhibiting different behaviors during the session or expressing different attitudes after the session as a result of idiosyncratic behavior from the trained confederates. The first step was to ensure that there were no differences between the participants who responded to one of the four confederates on any of the measures, including the Inclusion of Other in the Self Scale, Positive and Negative Affect Scale, Opinions Concerning Mode of Therapy, diagnosis, behaviors during session, and satisfaction ratings. The confederates were trained to present a similar case, and differences would contribute error to the investigation of the primary research questions. Multiple analysis of variances (ANOVAs) and post-hoc *t*-tests were conducted, and there were no significant differences found between confederates on any of the outcome measures, indicating participants' ratings of satisfaction, affect, closeness, and opinions regarding online counseling. These were not significantly influenced by the confederate playing the role of the client.

There were also no significant differences on outcomes across race/ethnicity or between participants from different training programs on the measures of online experience, satisfaction, closeness, PANAS scores, or the OCMT pre- and posttest.

Effects of Previous Online and Clinical Experience

Analyses were also performed to examine whether previous online experiences (i.e., the number of chat partners and number of hours spent a week chatting) were correlated with behaviors during the session, online experience, satisfaction, closeness, PANAS scores, or the OCMT pre- and posttest. Online experience was measured in the study because previous research has shown that familiarity with computer-mediated communication relates to outcome. It is likely that individuals with more computer-mediated communication experience would feel more comfortable meeting with clients and the synchronous chat environment, and thus, communicate more effectively with their online clients. The number of frequent online chat partners and the number of hours spent chatting online per week were not correlated with the OCMT pretest measures. The number of hours spent using chat programs per week was correlated with the posttest OCMT *Time Management* subscale, $r(32) = .423, p < .05$, which indicates that individuals with more chat experience felt more positive about how much work was accomplished in their online session.

The number of hours spent using synchronous chat per week was also positively related to the participant's level of satisfaction with the online session, $r(52) = .325, p < .05$, and their score on the OCMT *Time Management* subscale, $r(32) = .423, p < .05$, which indicated that participants with more synchronous chat experience felt they were able to accomplish a similar amount of work in their online session as they would in a face-to-face session. The number of frequent chat partners was also related to the participant's level of satisfaction, $r(52) = .303, p < .05$. The number of frequent chat partners was, further, related to participants' ratings of the client's level of positive affect as measured by the PANAS, $r(52) = .364, p < .01$, as well as the participant's level of positive affect as measured by the PANAS, $r(31) = .361, p < .05$. Participants' ratings of the client's negative affect as measured

by the PANAS were also significantly related to the number of frequent chat partners, $r(52) = -.324, p < .05$.

Previous clinical experience was also examined through correlations with attitudes before and after the online session and behaviors during the session. Although the amount of clinical experience was not correlated with any of the pretest scales on the *Opinions Concerning Mode of Treatment* measure, significance was found between clinical experience and the post-test *Enjoyment & Desire for Training* subscale, $r(34) = -.408, p < .05$. No significant relationships were found between the previous clinical experience of the participants and their behaviors during the session. Table 4 and Table 5 present correlations between various outcome measures, and the *Opinions Related to Mode of Therapy* scales.

What are the dynamics of online counseling?

The primary research question concerned the dynamics of online counseling conducted through synchronous chat communication. As no study has previously shown what online therapy looks like, the researcher was interested in examining whether some of the essential ingredients for therapy would be present. In addition, because online therapy is new and few therapists-in-training would likely be familiar with this type of work there was an interest in what effects participants' attitudes would have on the process and whether their attitudes would change after having experienced an online session. Specifically, the following questions were examined: (1) Are therapists capable of developing a relationship with their online client?, (2) Do therapists-in-training feel that that the online therapy session could be effective?, (3) Can therapists-in-training pick up on the important presenting issues in a synchronous chat environment?, (4) How comfortable will the therapists-in-training be with the online client's presenting issues?, (5) How will therapists-in-training behave during

their online session?, (6) What are the effects of participant's attitudes?, and (7) Will counselors' attitudes toward online counseling change after they have conducted a synchronous chat session?

Are therapists-in-training capable of developing a relationship with their online client?

To determine if the therapists-in-training were able to establish a relationship with their client, we examined the degree of therapeutic alliance the therapists-in-training felt they were able to form with their client and the closeness that they felt toward their clients after conducting the synchronous chat therapy session. On the post-session scores of the *Therapeutic Alliance* subscale of the OCMT, participants reported a mean level of 8.30 ($SD = 1.90$) out of a possible 12 points, which indicates that the therapists-in-training believed that a therapeutic alliance is possible in a synchronous chat environment. Participants also reported their perceived level of closeness with the client as measured by The Inclusion of Other in the Self Scale (IOS; Aron, Aron, & Smollan, 1992). Participants reported an average closeness score of 3.35 ($SD = 1.2$), which is below the middle range of the 7-point scale. The most common response on the IOS was 4 (33.3%), followed by 3 (29.6%), and 2 (18.5%).

Can therapists-in-training assess the important presenting issues in a synchronous chat environment?

To determine if therapists-in-training were able to pick up on an online client's presenting issues we examined the participants' DSM-IV diagnoses for those that saw an anxious, depressed, or mixed anxiety and depressed client. Confederates were trained to present symptoms from specific diagnoses: Major Depressive Episode, Generalized Anxiety Disorder, or Adjustment Disorder with Mixed Anxiety and Depressed Mood. For those that saw a depressed client, the majority of participants (90%) correctly included *depression* in

their diagnosis. Participants offered diagnoses for the depressed client ranging from Adjustment Disorder with Depressed Mood to Major Depressive Disorder, Single Episode. For the anxious client, the majority of participants also (86%) correctly included *anxiety* or *phobia* in their diagnosis. Common diagnoses for the anxious client were Adjustment Disorder with Anxious Mood, Generalized Anxiety Disorder, and Social Phobia. Participants that met with the client presenting with Adjustment Disorder with Mixed Anxiety and Depressed Mood offered a variety of diagnoses. Participants included adjustment disorder in only 37% of the cases, and several participants focused on one aspect of the presenting concerns such as Partner Relational Problem (26%). The complete listing of diagnoses offered by the participants for the three client types is presented in Table 6.

To investigate these findings further, the researcher selected six items related to anxiety and depression (i.e., "distressed," "upset," "scared," "ashamed," "nervous," "afraid") from the PANAS to determine if therapists-in-training were able to detect emotional differences between the anxious and depressed client in an online environment. Consistent with the diagnosis results, participants rated the anxious client as significantly more scared, $t(32) = 3.82, p < .01$, and afraid, $t(32) = 2.05, p < .05$, which suggested that therapists-in-training were able to accurately judge the anxious client as being more worrisome and stressed.

How comfortable will the therapists-in-training be with an online client's presenting issues?

To examine how comfortable therapists-in-training were with conducting an online session for different issues we examined their personal PANAS scores (i.e., the degree to which they felt positive about the experience) and their specific responses to two of the

negative affect items ("distressed," "irritable,") across the different client presenting issues (i.e., anxiety, depression, and mixed) Participants reported an average of 35 ($SD = 5.83$) on the Positive Affect Scale and an average of 13.33 ($SD = 3.06$) on the Negative Affect Scale, indicating that the therapists-in-training were generally comfortable and felt few negative emotions during the sessions. No differences were found between participant's overall Positive and Negative Affect scores in relation to the type of client as measured by an independent samples t -test; however, participants were more likely to report that they were distressed if they had met with the anxious client, $t(32) = 2.27, p < .05$.

How will therapists-in-training use interventions during their online session?

Data was analyzed to determine how participants responded to their clients during the synchronous chat session. Transcripts from the online sessions were coded using the taxonomy of counselor responses offered by Hill and O'Brien (1999). Table 3 displays the proportion of counselor responses for the anxious, depressed, mixed anxiety/depression client sessions. Proportions of responses are used instead of the total number of responses to give the reader a clearer understanding of how often each intervention used. Overall, the most common response was either an open- or closed-question. This was followed by approval and reassuring comments, opinions, and self-disclosures. Comments that fell in the Other category were also common, including greetings, closings, and miscellaneous comments that did not fit into other categories.

Across conditions (i.e., anxious, depressed) the therapists-in-training provided largely consistent types of interventions. Interestingly, female clients were asked more closed-ended questions than male clients, $t(33) = 2.21, p < .05$. Female participants were more likely to ask open-ended questions than male participants, $t(32) = 2.18, p < .05$.

What are the effects of participant attitudes?

To examine the effect on therapists'-in-training attitudes about online counseling, correlations were conducted between the participants' attitudes before the online session (i.e., the OCMT pretest scores) and their behavior during the session (i.e., the behaviors coded from the transcripts) and self-reports about the session (i.e., the PANAS, IOS). The results showed that participants' expectations about how much could be done in the session (i.e., the *Time Management* subscale of the OCMT) was related to the number of challenges they used in the session, $r(32) = .589, p < .001$. Similarly, their expectations about what the therapeutic alliance would be (i.e., the *Therapeutic Alliance* subscale of the OCMT) was related to the number of interpretations they used during the session, $r(32) = .384, p < .05$. It seems that therapists-in-training who were able to use more advanced clinical skills, such as interpretations and challenges, felt more comfortable with the online session. It may be that these skills facilitated quicker client movement and thus led to more depth and richness during the session.

The *Therapeutic Alliance* subscale score on the OCMT pretest was also related to the participants' reported level of closeness to the clients (i.e., the IOS score), $r(30) = .374, p < .05$. The *Enjoyment & Desire for Training* subscale was also related to the IOS score, $r(30) = .394, p < .05$. *Enjoyment & Desire for Training*, $r(29) = .369, p < .05$, and the *Time Management*, $r(29) = .476, p < .01$, subscales on the OCMT were correlated with participants' ratings of their own positive affect on the PANAS. These findings indicate that participants with more positive attitudes regarding online counseling before the session were likely to experience more closeness with the client and an increased level of positive affect during the session.

Will therapists'-in-training attitudes toward online counseling change after they have conducted a synchronous chat session?

Given that participants' attitudes were related to what happened during the session it is important to know if it is possible to change participants' attitudes. The OCMT measure was administered before and after the participants conducted the online therapy session. Means and standard deviations of the pre and post attitudes of the therapists-in-training can be viewed in Table 2. Before the start of the sessions the therapists-in-training reported a moderate level of interest and attitudes on the OCMT. Participants had a mean score of 26.73 ($SD = 6.35$) on the pretest, which is above the midpoint on the scale, which is 21. The highest scores on the pretest were found in the *Enjoyment & Desire for Training* subscale, with participants reporting a mean score of 9.73 ($SD = 1.84$) out of a possible 12. After conducting the session, paired t -tests showed that the therapists-in-training reported significant increases between their pretest and posttest scores on the OCMT for the *Therapeutic Alliance*, $t(33) = 2.87, p < .01$, and *Enjoyment & Desire for Training*, $t(33) = 2.63, p < .01$. A significant decrease was also found in the *Time Management* subscale between the pretest and posttest on the OCMT, $t(33) = 2.42, p < .05$.

DISCUSSION

Effects of Previous Online and Clinical Experience

The findings from the current study indicate that previous online experience appears to result in therapists-in-training feeling more comfortable with the session, as indicated by their personal PANAS scores. It also indicates that previous online experience may lead to therapists-in-training perceiving the client's affect as more positive.

The findings also indicate that more experienced therapists-in-training did not enjoy the online counseling session as much as therapists-in-training in the earlier stages of development. It may be that experienced therapists-in-training have a firmer basis of knowledge of FtF therapy to compare their online session against, and view the online format as an undesirable form of treatment. Another possibility is that experienced therapists-in-training may be so focused on their FtF therapy skills that the online setting was more disorienting to them than those therapists-in-training with less FtF experience.

Hypothesis Testing

Several hypotheses were tested in the current study, which were all related to assessing the dynamics of online counseling from the perspective of a therapist-in-training. First, it was predicted that therapists-in-training would successfully form a working relationship with their client in an online counseling session through synchronous chat, and the hypothesis was partially supported. Therapists-in-training reported that they felt online counseling could adequately provide the forum for an effective therapeutic relationship as measured by the posttest OCMT *Therapeutic Alliance* subscale; however, the measure of self-other overlap (IOS; Aron, Aron, & Smollan, 1992) was moderate, indicating that therapists-in-training did not feel as strong a connection with their client. When data from the

current study are compared to other results that have used the IOS to measure connectedness, the comparisons indicate that therapists-in-training may have experienced above average closeness. In a study on the self-other connectedness in Canadian and Chinese sample, Li (2002) found that Canadians evaluated their connectedness with close friends at a mean of 3.16 ($SD = 1.18$) and their closest friend at a mean of 3.78 ($SD = 1.25$). In the same study, Chinese individuals reported more connected relationship with their close friend ($M = 3.85$, $SD = 1.25$) and closest friend ($M = 4.34$, $SD = 1.26$).

Another study that utilized the IOS was conducted by De Cremer and Stouten (2003), and investigated how strangers reacted to working with other participants on a group decision-making task. Participants reported a mean level of 4.18 ($SD = 1.19$) on the self-other merging item. The IOS measure in the study was positively correlated with a measure of cooperation in the sample, $r = 0.24$, $p < .05$. When results from the IOS measure are compared to these data, it appears that therapists-in-training did not report a low level of closeness with their client, and that the moderate scores are a typical result of the IOS. In a previous study by Mallen, Day, and Green (2003), the IOS was used to measure the self-other overlap between dyads after a 30 minute face-to-face or synchronous chat conversation between two strangers. Results demonstrated that individuals in the face-to-face condition ($M = 4.5$, $SD = 1.42$) reported more closeness than those in the synchronous chat condition ($M = 3.2$, $SD = 1.71$). The results from the current study are very similar to the results of the synchronous chat group in the Mallen, Day, and Green (2003) study. The IOS has not been used to measure therapists' perceived level of closeness with a face-to-face client, but it is likely that the scores would be more elevated; future research should continue to assess the

differences and similarities of the therapeutic relationship between face-to-face and online counseling.

Can therapists-in-training assess the important presenting issues in a synchronous chat environment?

The second hypothesis stated that therapists-in-training would be able to pick up on important presenting issues and offer an accurate clinical diagnosis in an online counseling session through synchronous chat. This hypothesis was supported with data confirming that therapists-in-training could accurately assign a relevant DSM-IV diagnosis for their client. For both the anxiety and depressed client vignette, over 90% of the therapists-in-training assigned a proper diagnosis. Previous research has demonstrated that experienced therapists were able to provide more accurate diagnoses than less experienced therapists, or those with no experience (Morgan, et al., 2000). Basco and colleagues (2000) conducted a study to determine how diagnostic accuracy could be improved. Their study demonstrated that additional time and stages were needed to ensure a “gold standard” assessment. The gold standard was defined by a clinical interview, review of medical history, and discussion with each patient by a research psychiatrist. The level of agreement with this gold standard increased as additional routines were added to the assessment protocol. For example, a routine assessment agreed with the gold standard only 53% of the time, but when additional information was considered, such as medical records and a Structured Clinical Interview from the DSM, agreement with the gold standard increased to 79%. The current study demonstrated that therapists-in-training with only a few years of clinical experience were able to accurately identify presenting concerns, although our definition of agreement was not as strict as the “gold standard” defined above. Further support was found for therapists-in-

training possessing the ability to assess clients in an online environment because they rated the anxious client as significantly more "afraid" and "scared" than the depressed client as measured by the PANAS (Watson, Clark, and Tellegen, 1988).

Therapists-in-training, however, did not rate the depressed client as significantly higher on any of the distressed or upset items from the PANAS, which may indicate that they did not feel the depressed client was severe enough to warrant greater ratings. It is also possible that therapists-in-training viewed the anxious vignette as more severe, possibly because the depressed client was a bit less responsive. Overall, it appears that therapists-in-training were able to accurately determine the major presenting issues of the clients in the study.

How comfortable will the therapists-in-training be with an online client's presenting issues?

The third hypothesis stated that therapists-in-training would be comfortable with the online client's presenting issues. This hypothesis was partially confirmed, with most of the data leading to the confirmation that therapists-in-training did feel comfortable meeting with the client in an online setting. Therapists-in-training responded with a moderately high level of positive affect after the online counseling session as demonstrated by their responses to the PANAS. Therapists-in-training reacted to both the anxious and depressed client in a similar manner; however, they did report feeling more "distressed" after conducting an online therapy session with the anxious client. It seems that counselors attempted to adapt to the online mode of treatment but felt a slight amount of discomfort when working with the anxious client. It is possible that the anxious client seemed to be more severe to the

therapists-in-training, which would have placed more strain on the counselor to help the client with his or her issues.

How will therapists-in-training behave during their online session?

The fourth hypothesis stated that therapists-in-training will behave in a similar fashion during their online session when compared to a face-to-face session. This hypothesis was confirmed by the data analysis. Although the absence of nonverbal cues prohibited the amount of minimal encouragers such as "yes" and "mmm hmm," therapists-in-training used clinical skills proportionately similar to therapists working with a client in a face-to-face setting. The most common skills used were either questions or approval and reassuring comments geared to exploring client issues in more depth, which parallels findings from similar studies focused on face-to-face therapy (Hilly, 1978; Hill & O'Grady, 1985). It appears that the same skills that counselors use in face-to-face therapy can be used in a synchronous chat environment, although the synchronous chat did not allow for the communication of nonverbal behaviors.

How will therapists-in-training use interventions during their online session?

The fifth hypothesis stated that therapists'-in-training interventions during the session would affect their attitudes after the session. This hypothesis was partially supported after the data analysis. Therapists-in-training that used more challenges were found to report more favorable ratings about online counseling in regard to time management, while those that used more interpretations were more likely to report more favorable rating about online counseling in regards to the therapeutic alliance. These findings suggest that therapists-in-training with more comfort using advanced skills may find online counseling to be more effective.

This style of response is similar to other findings regarding the process of counseling sessions and fits into the Basic Listening Sequence of the microskills approach (Ivey & Ivey, 2002). In an analysis of therapist intentions, Hill and O'Grady (1985) found that the most common intention of therapists during a middle session with a neurotic client was to clarify, which was most commonly accomplished with a closed question. The attempts to clarify are most common during the first half of a therapy session, followed by attempts to get information, which is usually accomplished again by asking closed or open questions. In an earlier study, Hill (1978) also found that closed questions were the most common type of response during the first third of a therapy session next to minimal encouragers. Since the lack of nonverbal cues prohibits minimal encouragers such as "mmm hmm," and "okay," it appears that therapists-in-training in the current study filled this gap by asking more questions for clarification and providing approval and reassurance so the client would continue.

Will therapists'-in-training attitudes toward online counseling change after they have conducted a synchronous chat session?

The sixth hypothesis stated that therapists-in-training would experience a positive change in their attitudes toward online counseling after they had conducted a synchronous chat session. This hypothesis was partially supported by the data analysis. Therapists-in-training did experience significant attitude change between the pretest and posttest of the OCMT. In all but one case, therapists-in-training expressed more favorable views for the potential for online counseling after they conducted an online counseling session. Therapists-in-training did, however, report lower scores after they conducted the online counseling session in regards to the amount of work they could accomplish compared to a face-to-face

session. The results indicate that therapists-in-training initially expressed moderate beliefs that online counseling could be effective. After conducting the session, the same therapists-in-training experienced a shift in a positive direction in their attitudes toward online counseling in every way except the ability of online counseling to be as time-efficient as face-to-face counseling. Overall, the results of this study indicate that therapists-in-training would be agreeable to receiving training on how to conduct online counseling sessions and believe that it could be a viable treatment option for the delivery of therapy.

Therapists-in-training with earlier experience using synchronous chat reported more satisfaction and a closer relationship with their client during the online session. This hypothesis was partially supported, as therapists-in-training with more chat experience reported feeling more satisfaction with the session; however, they did not report higher levels of closeness as measured by the IOS or the posttest OCMT *Therapeutic Alliance* subscale. Therapists-in-training with more online synchronous chat experience did appear to be more comfortable with the client and the online session because they reported higher levels of positive affect on the PANAS, and also rated the client as having more positive affect. It may be that therapists-in-training with more experience communicating through synchronous chat felt more at ease with the technology and therefore experienced less anxiety as a result of transferring their clinical skills to an online environment. Although therapists-in-training with more synchronous chat experience reported increased levels of satisfaction, the findings demonstrate that they did not form a better working relationship with their client.

Since the OCMT scales were developed for this study, the psychometric properties of the scale are not fully known at this point in time. As can be seen in Table 4, there is a high level of covariation among the four subscales on both the pre- and posttest. For example, the

OCMT *Therapeutic Alliance* pretest scale shares 56% of the variance with the *Enjoyment and Desire for Training* pretest scale, and 29% of the variance with the *Quality of Care* pretest scale. The amount of covariation does decrease on the posttest measures between these scales, 44% and 21% respectively. For these data, it appears that participants are more likely to offer varied responses between the four subscales of the OCMT on the posttest, while their responses on the OCMT pretest hang together. Future research utilizing the OCMT should further explore the psychometrics of the scale.

Overall, these findings indicate that therapists-in-training felt more positive about the capabilities of online counseling in regard to establishing a therapeutic alliance and enjoyed the experience more than they thought they would before beginning the session. Participants were, however, more negative about the capabilities of online counseling in regard to time management or the amount of work that can be accomplished in a single online counseling session.

Limitations

The current study was constrained for ethical and practical purposes. As a result, there are several limitations. Primarily, the largest drawback of current study is the fact that the client was not genuine and was acted out by a confederate. A confederate was used to alleviate many of the ethical concerns involved in providing online therapeutic services (see Sampson, 1998; Shapiro & Schulman, 1996; Lloyd, 1996; Stricker, 1996; Brown, 1998; Stein, 1997; Jerome, DeLeon, James, et al., 2000). Since the majority of therapists-in-training resided in a state other than the location of the study and the client, any provision of services may have been illegal under current state licensure jurisdictions. The use of a confederate negated this issue and allowed the researcher to have a larger sample size. Also, since

therapists-in-training were used, the trainees would have required proper supervision either from a member of the research team or an advanced therapist from each location, which was outside the scope of the present study. The interested reader is referred to Kanz (2001) for a discussion of online supervision. The use of the confederate reduced the need for systematic supervision after each session, and enabled the researcher to address questions and concerns within the debriefing timeframe at the conclusion of the study. Because a confederate was used to portray the client, caution must be used when interpreting the results of how therapists-in-training reacted to the online session. It may be that the behavior of a genuine client might be different from the work of the confederates in the study, but confederates were trained for several weeks to act out a convincing version of a typical college-aged client. Support for the confederates' ability to portray an actual client was found in some of the reactions of the participants; many of them were surprised to learn that it was not a real client and completely accepted the deception of the study. Future studies would certainly benefit from linking genuine clients to therapists-in-training to gain a more accurate and complete picture of the online counseling process. In that type of study, not only can the therapists'-in-training attitudes and behaviors be examined, but client's attitudes and behaviors can be analyzed as well.

A second limitation of the current study is that novice therapists were used in the sample. Therapists-in-training may not replicate licensed therapists whom have been conducting therapy sessions for many years. The use of novice therapists-in-training allowed the researcher access to a wider sample size. Students in graduate psychology programs are familiar with research participation, and are more willing to participate in a study than established practitioners, who would likely demand more financial reimbursement for their

time than the researcher could provide. Findings from the current study indicate that therapists-in-training with more clinical experience were less likely to enjoy the experience working with a client in the synchronous chat session and want future training in the area. It may be that well-trained therapists can pinpoint more limitations in the online mode of treatment, including the lack of nonverbal and visual cues, while new therapists-in-training may possess a certain naiveté about the counseling process. Therapists who have received more training are typically older than therapists with less training, and it is possible that older therapists may not have as much experience with online communication as their younger colleagues. This possible confound should be explored in future research studies to gain a clearer picture of the attitude toward online counseling from advanced therapists.

A third limitation is that the online counseling session was a 50-minute, one-time only session, which limited the amount of relationship formation and clinical work that could be accomplished by the therapist-in-training. The one-time only session format was used because it would have been extremely difficult to get therapists-in-training to continue to see their client for more than one session with the resources the researcher had available. If given more time, therapists-in-training may have developed different views about online counseling in either a positive or negative direction. The findings from the current study should be applied to an initial therapy session, and any further implications should be made with caution. It has been reported that individuals that work through computer-mediated communication may take a longer time to create a solid working relationship than individuals in face-to-face settings (Walther, 1995). Even within the 50-minute time frame, therapists-in-training were shown to accurately diagnosis the client and gain a comfortable sense of a

working relationship. Future research should allow more sessions for the online counseling sessions to develop to determine the long-term effects of the mode of treatment.

Implications for Training

The current study offers knowledge for those interested in training therapists to work in an online environment. Currently, there are no means of training future therapists to work in an online setting in graduate level counseling psychology programs. The literature related to the possible effectiveness of online counseling is still muddled and sparse, but the reality is that some master's and doctoral level therapists can provide and are providing online counseling services once they earn their degrees. The therapists-in-training in the current study expressed greater levels of interest once they were exposed to a synchronous chat online session, indicating that the experience led trainees to learn more about online counseling.

If graduate programs in counseling psychology begin to train therapists to work in an online setting, several points can be gleaned from the current study. First, before therapists-in-training work in an online setting, they should be accustomed to the technology that they are going to be using. For example, over 50% of the therapists-in-training in the current study had never used a synchronous chat program before meeting with their client. Although they were given information about the basics of communication through synchronous chat, there are many nuances to the delivery of messages that can increase the depth of the messages being sent back and forth between therapist and client. Therapists-in-training would be well served by gaining experience with various forms of computer-mediated communication before they attempt to conduct counseling sessions online. For instance, this can be accomplished through coursework in a communication related field and by seeking out

hands-on experiences by using the technology to gain a clearer understanding of how communication flows back and forth in synchronous chat. Another training option is to have therapists-in-training conduct online therapy sessions through roleplays in conjunction with practicum classes. This approach would be similar to face-to-face roleplays, which are standard training in graduate counseling programs.

Second, training should begin early since results from the current study indicate that experienced therapists are less likely to acclimate themselves to the new mode of service delivery. With years of training in face-to-face counseling skills, experienced therapists may be unwilling or unable to translate these skills into a computer-mediated environment. By integrating training on online counseling into the early stages of graduate curriculum, therapists-in-training would be exposed to the newer modes of treatment before they get stuck in only a face-to-face counseling mindset, which may prevent them from adequately offering these services in the future.

Implications for Online Counseling Practice

There are currently few studies that have examined the process of online counseling. The current study explored the dynamics of an online counseling relationship from the perspective of a therapist-in-training, and several of the findings could be applicable to practitioners who are providing services to clients through computer-mediated communication. First, it does appear that extra time and effort should be spent on forming a working alliance with the client. Typically, this is done in face-to-face therapy sessions as well, but the lack of nonverbal cues and the delayed flow of information appear to make it more difficult to form a close relationship with another individual in a 50-minute time frame through synchronous chat. Therapists conducting sessions online should be overt about their

desire to form a working alliance with the client, and may need to spend more time getting acquainted than would be typical during an initial face-to-face session. For example, since nonverbal means of communicating empathy are not available for a therapist, the therapist must be more willing to literally spell out for the client how they are reacting to the client. Messages can be typed to convey understanding, sadness, grief, excitement or any other type of emotional response. In face-to-face sessions, these feelings from the therapist could usually be interpreted by the client just by reading the facial expressions, posture, or hearing verbal responses, such as sighs or gasps, of the therapist. As demonstrated by the results of the current study, therapists may find it difficult to gain a working alliance in an initial online counseling session, and it is likely that clients will feel a similar disconnection from their therapist in the early stages of an online counseling relationship.

The results of this study indicate that therapists could accurately assess the presenting issues of clients during an initial synchronous chat counseling session. Each therapist has their own unique style, and this will carry over into their work online as they attempt to link their intentions to the interventions they choose with the client. The most common intervention strategy of therapists-in-training was to ask numerous questions to gain information and clarification about the client's issues. It seems that asking questions would be one of the most effective ways to collect information earlier in a session to obtain enough information to offer a diagnosis. However, relying too heavily on questions may turn an online counseling session into a cycle of therapists' questions and clients' responses. Therapists who conduct face-to-face sessions are discouraged from using one type of intervention too often because it can lead to the clients' becoming frustrated, which would ultimately negatively affect the working alliance. Research has demonstrated that closed

questions are perceived as not very helpful when working with clients (Hill, Helms, Tichenor, et al., 1988), and closed questions were the most common intervention used in the current study. It is likely that the novice level of the therapists involved in the study was related to their reliance on closed questions; however, it is also possible that the online setting made it awkward to use other counseling skills. Therapists practicing in an online setting should be aware of this tendency toward too many questions, and attempt to mix in other interventions to assure that the sessions flow smoothly. For example, interpretation has been the one counselor intervention that has been consistently been found to be helpful (Elliott, 1985; Elliott, Barker, Caskey, & Pistrang, 1982, Hill, Carter, & O'Farrell, 1983, O'Farrell, Hill & Patton, 1986). It is noteworthy, and not surprising then, that therapists-in-training who used interpretations more often in the current study were also more likely to feel that a therapeutic alliance was being formed with their client. Although questions may be the easiest way to assess a client's presenting concerns during a synchronous chat session, it is important for therapists to use other interventions with their client.

Suggestions for Future Research

The most obvious suggestion for future research is to analyze the reactions of a genuine client working with a therapist in an online counseling session. "The ultimate criterion for the effectiveness of the helper's intervention is always the client's response" (Hill & O'Brien, 2000, p. 43). Since the effectiveness of a therapist's interventions can be better judged when analyzed in conjunction with the client's response, future research should connect therapists with genuine clients in online settings. In addition to using genuine clients instead of confederates, it would be useful to use experienced therapists instead of only therapists-in-training. Novice therapists are more prone to experience anxiety about their

ability to provide therapeutic services as well as more stress related to countertransference (Nutt, Williams, Judge, Hill, & Hoffman, 1997; Van Wagoner, Gelso, Hayes, & Diemer, 1991). Since the client in an online session is literally portrayed by a blank screen, novice therapists may experience more interference from dealing with countertransference issues than more experienced therapists. It is also possible that therapists will experience less interference since they do not have countertransference from visual cues. It could also be true that clients have more transference responses since they also are not constrained by visual cues. Therapists with more experience may react differently to working with a client in an online setting, which would affect the behaviors during the sessions and their attitudes after the sessions. It has already been mentioned that experienced counselors may be more likely to resist the practice of online counseling, and this viewpoint would certainly affect the quality of the therapeutic outcome if experienced counselors do not hold an allegiance for the mode of treatment. These questions should be investigated further to gain a clearer picture about the dynamics of online counseling.

Future research should also use common measures and research designs that have been used in the analysis of traditional face-to-face counseling. Measures such as the Counseling Rating Form (LaCrosse & Barak, 1976; Corrigan & Schmidt, 1983), Working Alliance Inventory (Horvath & Greenberg, 1989), and Session Evaluation Questionnaire (Stiles & Snow, 1984) should be used so that results from studies investigating online counseling can be compared to similar studies that have analyzed face-to-face counseling sessions.

Conclusion

The current study was an attempt to shed light on the process of online counseling mediated through synchronous chat from the perspective of a therapist-in-training. Overall, the therapists-in-training were satisfied with the session, open to future training in online counseling, and accurate in assessing the client's presenting issues. Therapists-in-training became significantly more favorable to online counseling after conducting an online session through synchronous chat in regard to the ability to develop a therapeutic alliance with a client, their desire for future training, and the overall quality of care of online counseling as compared to face-to-face therapy. Therapists-in-training became more negative after conducting the online counseling session in regard to the efficiency of the session. The study demonstrated that the therapists-in-training used skills in a similar proportion as they would in face-to-face therapy sessions, indicating that this aspect of the process of online counseling may not differ dramatically from face-to-face counseling. It appeared that the inability to provide minimal verbal or nonverbal encourages resulted in therapists asking more questions in the online setting. The data from the current study provides answers to how therapists-in-training respond to working in a synchronous chat environment.

It has already been predicted that the practice of online counseling will increase in the future (Norcross, Hedges, & Prochaska, 2002), and it will be important for therapists to be well trained to meet the needs of clients through this new mode of treatment. Although definitive standards for online practice are currently lacking, the data from the current study suggest several ways in which therapists could be trained to handle the unique challenges of working with a client who is not physically present in the same room. The current study only begins to scratch the surface of the dynamics involved in the practice of online counseling,

but the results offer more information about these dynamics, and provide a roadmap for future researchers to examine the process of online counseling.

TABLE 1

Kappa Values Among Coders for Counselor Response System

	Kappa
n = 19	
Approval and Reassurance	0.86
Closed Question	0.98
Open Question	0.97
Restatement	0.77
Reflection of Feeling	0.76
Challenge	-0.08
Interpretation	0.41
Self-Disclosure	0.86
Immediacy	0.91
Opinion	0.85
Direct Guidance	0.29
Other	0.79

TABLE 2**Opinions Concerning Mode of Treatment**

	Pretest	Posttest
N	34	34
Time Management	6.53 (2.46)	5.23 (2.82)*
Therapeutic Alliance	7.33 (2.19)	8.30 (1.90)*
Enjoyment & Desire for Training	9.73 (1.84)	10.47 (1.61)**
Quality of Care	3.13 (1.41)	3.40 (1.35)
Total	26.73 (6.35)	27.40 (5.59)

Values are means and standard deviations (in parentheses)

* $p < .05$

** $p < .01$

TABLE 3

Counselor Response System in Percentages of Total Responses by Client Type

	Anxiety	Depression	Mixed
n	14	19	19
Approval and Reassurance	19.6 (7.76)	15.32 (9.28)	13.70 (6.67)
Closed Question	23.75 (8.51)	29.97 (11.96)	21.66 (9.77)
Open Question	18.98 (9.31)	13.58 (5.54)	18.04 (7.07)
Restatement	4.60 (3.79)	6.70 (4.87)	8.71 (5.52)
Reflection of Feeling	3.22 (3.13)	2.55 (3.24)	6.45 (3.78)
Challenge	1.81 (3.15)	2.10 (3.24)	2.01 (2.46)
Interpretation	0.50 (1.44)	0.55 (1.16)	0.81 (1.75)
Self-Disclosure	5.74 (4.48)	7.15 (4.79)	3.70 (2.38)
Immediacy	3.02 (2.92)	2.90 (5.15)	4.84 (4.24)
Opinion	7.10 (4.77)	11.19 (7.00)	10.01 (5.71)
Direct Guidance	2.85 (2.38)	2.56 (2.26)	3.10 (2.69)
Other	8.84 (6.54)	5.74 (4.18)	6.96 (7.44)

TABLE 4

Correlations Between Opinions Concerning Mode of Therapy Pre- and Posttest

	<i>r</i>	OCMT Pretest Total Score	OCMT Posttest Total Score	OCMT Pretest Time Management	OCMT Pretest Therapeutic Alliance	OCMT Pretest (EDT)	OCMT Pretest Quality of Care	OCMT Posttest Time Management	OCMT Posttest Therapeutic Alliance	OCMT Posttest (EDT)	OCMT Posttest Quality of Care
OCMT Pretest Total Score	<i>r</i>	1									
OCMT Posttest Total Score	<i>r</i>	.498**	1								
OCMT Pretest - Time Management	<i>r</i>	.796**	.441*	1							
OCMT Pretest - Therapeutic Alliance	<i>r</i>	.843**	.387*	.445**	1						
OCMT Pretest - Enjoyment & Desire for Training (EDT)	<i>r</i>	.810**	.491**	.420*	.747**	1					
OCMT Pretest - Quality of Care	<i>r</i>	.787**	.234	.606**	.543**	.502**	1				
OCMT Posttest - Time Management	<i>r</i>	.134	.728**	.359	-.069	.099	-.043	1			
OCMT Posttest - Therapeutic Alliance	<i>r</i>	.487**	.759**	.282	.599**	.499**	.127	.256	1		
OCMT Posttest - Enjoyment & Desire for Training (EDT)	<i>r</i>	.450*	.830**	.257	.404*	.614**	.154	.393*	.662**	1	
OCMT Posttest - Quality of Care	<i>r</i>	.554**	.633**	.368*	.419*	.391*	.695**	.211	.461**	.478**	1

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

TABLE 5

Correlations Between OCMT Posttest and Outcome Measures

	Satisfaction	Self in Other Scale	Client PANAS - Positive Affect	Client PANAS - Negative Affect	Counselor PANAS - Positive Affect	Counselor PANAS - Negative Affect	OCMT Posttest Total Score	OCMT Posttest Time Management	OCMT Posttest Therapeutic Alliance	OCMT Posttest Enjoyment & Desire for Training	OCMT Posttest Quality of Care
Satisfaction	<i>r</i> 1										
Self in Other Scale	<i>r</i> .638**	1									
Client PANAS - Positive Affect	<i>r</i> .385*	.378*	1								
Client PANAS - Negative Affect	<i>r</i> .063	.201	-.095	1							
Counselor PANAS - Positive Affect	<i>r</i> .578**	.524**	.718**	.065	1						
Counselor PANAS - Negative Affect	<i>r</i> -.020	.087	.188	.304	.124	1					
OCMT Posttest Total Score	<i>r</i> .713**	.501**	.350*	.055	.524**	-.069	1				
OCMT Posttest - Time Management	<i>r</i> .590**	.270	.235	-.115	.303	-.283	.728**	1			
OCMT Posttest - Therapeutic Alliance	<i>r</i> .601**	.591**	.443**	.214	.471**	.023	.759**	.256	1		
OCMT Posttest - Enjoyment & Desire for Training	<i>r</i> .611**	.442**	.254	-.018	.477**	.019	.830**	.393*	.662**	1	
OCMT Posttest - Quality of Care	<i>r</i> .200	.188	.070	.203	.345*	.210	.633**	.211	.461**	.478**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

TABLE 6

Counselor Diagnoses by Client Type	
Client Vignette	Diagnosis Frequency
Major Depressive Episode	n = 19
Depressive Disorder NOS	8
Adjustment Disorder with Depressed Mood	6
Major Depressive Episode	3
Phase of Life Problem	2
Generalized Anxiety Disorder	n = 14
Anxiety Disorder NOS	6
Adjustment Disorder with Anxiety	4
Generalized Anxiety Disorder	1
Social Phobia	1
Adjustment Disorder with Depressed Mood	1
Academic Problem	1
Adjustment Disorder with Mixed Anxiety and Depressed Mood	n = 19
Partner Relational Problem	5
Depressive Disorder NOS	4
Adjustment Disorder with Mixed Anxiety and Depressed Mood	3
Occupational Problem	2
Adjustment Disorder with Depressed Mood	2
Adjustment Disorder with Anxiety	2
Academic Problem	1

APPENDIX A. CASE VIGNETTE**Demographic Background**

- Birth Date: August 18, 1983 (20)
- Location: Born in Roseville, MN
- Race: Caucasian
- Religion: Christian – Lutheran; church is not as important as it was in younger years
- Family: Mother & Father still alive and married; 1 older brother (25) & 1 younger sister (16); handful of similar age cousins on mother’s side of family
- Friends: Socially active and capable during high school – played basketball for one year and was also a member of history honors society
- Status: Sophomore
- Major: Education w/ 3.17 GPA
- Activities: No longer involved with intramurals or clubs on campus
- Work Status: Part-time at Sam Goody

Presenting Issues

- Depression: Recently experiencing difficulties with a long-distance relationship that began over the summer while visiting home

Old friend from high school that was also a love interest of sorts

Things finally “clicked” and it has been a steady relationship for 4 months

Decided to stay committed to each other because it felt like the right thing to do

Lacking motivation to get to classes on time and to perform at the usual level on coursework

Test scores have slipped to a C level during the semester and several projects have been turned in late – quality is not as good

Sleeping extra hours (8-10 hrs/night compared to usual 6-7) and has recently lost 10 lbs.

Drinking a bit more when going out to parties recently – 6-10 drinks/weekend compared to 4-6 drinks/weekend

Relationships on campus not as meaningful – finding it difficult to engage in small talk, etc

Pulling away from both roommates (living in The Towers) and not interacting as much in class and other social situations, such as parties, etc

Anxiety: More and more concerned with image in front of others in social situations
 Monitors behaviors and speech in front of others that are unfamiliar
 More concerned about career direction and if the current choice of major is the correct one
 Worried about the changing job market and if there is really enough desire to go on to grad school to become a teacher
 Concerned about relationship ending from the distance – certain amount of trust issues with partner being far away (4 hours) at another college (St. Cloud State)

Stuck in a rut of questioning own actions and over-analyzing every action,
which creates a feeling of just wanting to close up into a protective shell

APPENDIX B. ANNOUNCEMENT TO TRAINING DIRECTORS

I am currently pursuing a Ph.D. in Counseling Psychology at Iowa State University. I am contacting you because I would like to extend the opportunity to your students to participate in my dissertation research and receive \$10. Would it be possible to forward this request to your students?

I am investigating the dynamics of online counseling, which consists of a therapist and a client meeting through the Internet (i.e., synchronous "chat"). The purpose of the study is to ascertain the possible benefits and limitations of online counseling. Specifically, I am looking forward to the responses from counselors in training after they work with a client in an online environment. This study has been approved by our university IRB Committee.

Participation in the study will last approximately 90 minutes, and students will be paid \$10. If he or she decides to discontinue participation at any time during the study, the \$10 will still be sent.

Please contact me if you are interested in participating in this study or have any questions or concerns about the project. I can be reached at Alive30@aol.com.

Sincerely,

Michael J. Mallen, M.A.

APPENDIX C. DEBRIEFING STATEMENT

Thank you for participating in the study. The current research is being conducted for several reasons. First, the increasing rise in the popularity and familiarity with online communication has led to the advent of online counseling. Although therapy sessions are currently being conducted on a daily basis through the Internet, there is a lack of research to determine the strengths and weaknesses of the process. Also, there are no training models available to teach counselors how to interact with clients in an online environment, which clearly poses new challenges and opportunities for both the client and counselor. The current study is a first step in understanding the dynamics of an interaction between a client and counselor online.

Another aim of the study investigated the unique aspects of online communication, which includes the lack of non-verbal cues. This includes the appearance of the client, such as age, sex, and race. A member of the research team acted as the client and was not a real client with real issues. Information about the client was generated in advance by the research team and was basically turned into a living, breathing case vignette through the online environment. These deceptions were necessary because participants will be more likely to engage in normal communication processes if they believe the person is a real client.

It is possible that you could feel some discomfort from the deceptions used in the current study. Counselors are trained to accurately read people and to be professionals. Misreading a client can be very disheartening but should not be taken personally. One of the more interesting dynamics of the Internet and online communication is the anonymity it allows the user, and in this case, the client. The proverbial “blank screen” in a counseling

situation becomes literal in every sense of the word as all visual cues are lost for the counselor. Much of therapy is reading non-verbal forms of communication and the current study is only scratching the surface to determine if online counseling is a viable treatment modality.

Please feel free to discuss the current study with the experimenter and ask questions if you would like clarification about the study. If you find yourself having questions or comments later about the study, please contact Dr. David Vogel, W149 Lagomarcino Hall, ISU (515) 294-1582 or Michael Mallen, W139 Lagomarcino Hall, ISU (515) 294-8126. Thank you again for your participation.

REFERENCES

- Adrianson, L., & Hjelmquist, E. (1991). Group processes in face-to-face and computer-mediated communication. *Behaviour & Information Technology*, 10, 281-296.
- American Psychological Association. (1952). Recommended standards for training counseling psychologists at the doctorate level. *American Psychologist*, 7, 175-181.
- American Psychological Association. (1991). Recommended standards for training counseling psychologists at the doctorate level. *Behaviour & Information Technology*, 10(4), 281-296.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders: Text revision* (4th ed.). Washington, DC: Author.
- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, 63(4), 596-612.
- Aron, A., Melinat, E., Aron, E. N., Vallone, R. D., & Bator, R. J. (1997). The experimental generation of interpersonal closeness: A procedure and some preliminary findings. *Personality and Social Psychology Bulletin*, 23(4), 363-377.
- Atkinson, D. R., & Lowe, S. M. (1995). The role of ethnicity, cultural knowledge, and conventional techniques in counseling and psychotherapy. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (pp. 387-413). Thousand Oaks, CA: Sage.
- Bachelor, A. (1991). Comparison and relationship to outcome of diverse dimensions of the helping alliance as seen by client and therapist. *Psychotherapy*, 28, 534-549.
- Barak, A. (1999). Psychological applications on the Internet: A discipline on the threshold of a new millennium. *Applied & Preventive Psychology*, 8, 231-245.

- Barak, A., & Lacrosse, M. B. (1975). Multidimensional perception of counselor behavior. *Journal of Counseling Psychology, 22*, 471-476.
- Basco, M. R., Bostic, J. Q., Davies, D., Rush, A. J., Witte, B., Hendrickse, W., & Barnett, V. (2000). Method to improve diagnostic accuracy in a community mental health setting. *American Journal of Psychiatry, 157*, 1599-1605.
- Battle, C. C., Imber, S. D., Hoehn-Saric, R., Stone, A. R., Nash, E. R., & Frank, J. D. (1966). Target complaints as criteria for improvement. *American Journal of Psychotherapy, 20*, 184-192.
- Beck, J. S., (1996). Cognitive therapy of personality disorders. In P. M. Salkovkis (Ed.), *Frontiers of cognitive therapy* (pp. 165-181.) New York, NY: Guilford Press.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*, 561-571.
- Berscheid, E., Snyder, M., & Omoto, A. M. (1989). The Relationship Closeness Inventory: Assessing the closeness of interpersonal relationship. *Journal of Personality and Social Psychology, 57*, 792-807.
- Barkhi, R., Jacob, V. S., & Pirkul, H. (1999). An experimental analysis of face to face versus computer mediated communication channels. *Group Decision and Negotiation, 8*, 325-347.
- Bloom, J. (1998). The ethical practice of webcounseling. *British Journal of Guidance and Counseling, 26*, 53-60.
- Boer, P. M. (2001). *Career counseling over the Internet: An emerging model for trusting and responding to online clients*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Braithwaite, D. O., Waldron, V. R., & Finn, J. (1999). Communication of social support

- in computer-mediated groups for people with disabilities. *Health Communication, 11*, 123-151.
- Brammer, L. M., & Abrego, P. J. (1981). Intervention strategies for coping with transitions. *The Counseling Psychologist, 9*, 19-36.
- Bresnahan, M. J., & Murray-Johnson, L. (2002). The healing web. *Health Care for Women International, 23*(4), 398-407.
- Brown, F. W. (1998). Rural telepsychiatry. *Psychiatric Services, 49*(7), 963-964.
- Buchanan, T., & Smith, J. L. (1999). Research on the Internet: Validation of a world-wide web mediated personality scale. *Behavior Research Methods, Instruments, & Computers, 31*(4), 565-571.
- Celio, A. A., Winzelberg, A., Dev, P., & Taylor, C. B. (2002). Improving compliance in on-line, structured self-help programs: Evaluation of an eating disorder prevention program. *Journal of Psychiatric Practice, 8*(1), 14-20.
- Childress, C. A., & Asamen, J. K. (1998). The emerging relationship of psychology and the Internet: Proposed guidelines for conducting internet intervention research. *Ethics & Behavior, 8*(1), 19-35.
- Clement, P., Brooks, F. R., Dean, B., & Galaz, A. (2001). A neuropsychology telemedicine clinic. *Military Medicine, 166*(5), 382-384.
- Cohen, G. E., & Kerr, B. A. (1998). Computer-mediated counseling: An empirical study of a new mental health treatment. *Computers in Human Services, 15*(4), 13-26.
- Cook, J. E., & Doyle, C. (2002). Working alliance in online therapy as compared to face-to-face therapy: Preliminary results. *CyberPsychology & Behavior, 5*, 95-105.
- Corrigan, J. D., Dell, D. M., Lewis, K. N., & Schmidt, L. D. (1980). Counseling as a social

- influence process: A review. *Journal of Counseling Psychology*, 27, 395-441.
- Corrigan, J. D., & Schmidt, L. D. (1983). Development and validation of revisions in the Counseling Rating Form. *Journal of Counseling Psychology*, 30, 64-75.
- Crook, K., Beaver, B. R., & Bell, M. (1998). Anxiety and depression in children: A preliminary examination of the utility of the PANAS-C. *Journal of Psychopathology and Behavioral Assessment*, 20, 333-350.
- Crosen, R. T. A. (1999). Look at me when you say that: An electronic negotiation simulation. *Simulation & Gaming*, 30(1), 23-37.
- Cutrona, C. E., & Suhr, J. A. (1992). Controllability of stressful events and satisfaction with spouse support behaviors. *Communication Research*, 19, 154-174.
- Day, S. X. (2004). *Theory and design in counseling and psychotherapy*. Boston, MA: Houghton Mifflin Company.
- Day, S. X., & Schneider, P. (2000). The subjective experiences of therapists in face-to-face, video, and audio sessions. In J. W. Bloom, G. R. Garry, et-al (Eds.). *Cybercounseling and cyberlearning: Strategies and resources for the millennium*. (pp. 203-218). Alexandria, VA: American Counseling Association.
- Day, S, X, Schneider, P. L. (2002). Psychotherapy using distance technology: A comparison of face-to-face, video, and audio treatment. *Journal of Counseling Psychology*, 49(2), 499-503.
- De Cremer, D., & Stouten, J. (2003). When do people find cooperation most justified? The effect of trust and self-other merging in social dilemmas. *Social Justice Research*, 16, 41-52.
- Derogatis, L. R., & Coons, H. L. (1993). Self-report measures of stress. In L. Goldberger

- & S. Breznitz (Eds.). *Handbook of stress: Theoretical and clinical aspects* (2nd ed.) (pp. 200-233). New York, NY: Free Press.
- Dietz-Uhler, B., & Bishop-Clark, C. (2001). The use of computer-mediated communication to enhance subsequent face-to-face discussions. *Computers in Human Behavior, 17*, 269-283.
- Dongier, M., Tempier, R., Lalinec-Michaud, M., & Meuneir, D. (1986). Telepsychiatry: Psychiatric consultation through two-way television: A controlled study. *Canadian Journal of Psychiatry, 31*, 32-34.
- Eckert, P. A. (1993). Acceleration of change: Catalysts in brief therapy. *Clinical Psychology Review, 13*, 241-253.
- Elliott, R. (1985). Helpful and nonhelpful events in brief counseling interviews: An empirical taxonomy. *Journal of Counseling Psychology, 32*, 307-322.
- Elliott, R., Barker, C. B., Caskey, N., & Pistrang, N. (1982). Differential helpfulness of counselor verbal response modes. *Journal of Counseling Psychology, 29*, 354-361.
- Erikson, E. H. (1959). Identity and the life cycle: Selected papers. *Psychological Issues, 1*, 1-171.
- Fink, J. (1999). *How to use computers and cyberspace in the clinical practice of psychotherapy*. Northvale, NJ: Jason Aronson Inc.
- Finn, J. (1999). An exploration of helping processes in an online self-help group focusing on issues of disability. *Health and Social Work, 24*, 220-231.
- Gahan, C., & Hannibal, M. (1998). *Doing qualitative research using QSR Nud•ist*. London, England: Sage Publications Ltd.
- Gaston, L, Piper, W. E., Debbane, E. G., Bienvenu, J., & Garant, J. (1994). Alliance and

technique for prediction outcome in short- and long-term analytic psychotherapy.

Psychotherapy Research, 4, 121-135.

Gelso, C. J., & Carter, J. (1994). Components of the psychotherapy relationship: Their interaction and unfolding during treatment. *Journal of Counseling Psychology*, 41, 296-306.

Gelso, C. J., & Fretz, B. R. (2000). *Counseling Psychology*. (2nd ed.) Forth Worth, TX: Harcourt Brace College Publishers.

Gelso, C. J., & Lent, R. W. (2000). Scientific training and scholarly productivity: The person, the training environment, and their interaction. In S. D. Brown and R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed.). New York, NY: John Wiley & Sons, Inc.

Ghosh, A., & Marks, I. M. (1987). Self-treatment of agoraphobia by exposure. *Behavior Therapy*, 18(1), 3-16.

Ghosh, A., Marks, I. M., & Carr, A. C. (1988). Therapist contact and outcome of self-exposure treatment for phobias: A controlled study. *British Journal of Psychiatry*, 152, 234-238.

Glueckauf, R. L., Fritz, S. P., Ecklund-Johnson, E. P., Liss, H. J., Dages, P., & Carney, P. (2002). Videoconferencing-based family counseling for rural teenagers with epilepsy: Phase 1 findings. *Rehabilitation Psychology*, 47(1), 49-72.

Glueckauf, R. L., Whitton, J. D., & Nickelson, D. W. (2001). Telehealth: The new frontier in rehabilitation and healthcare. In M. J. Scherer (Ed.), *Assistive technology: Matching device and consumer for successful rehabilitation* (pp. 197-213). Washington, DC: American Psychological Association.

- Goldfried, M. R., Greenberg, L. S., & Marmar, C. (1990). Individual psychotherapy: Process and outcome. *Annual Review of Psychology, 41*, 659-688.
- Greenberg, L. S., & Pinsof, W. M. (1986). Process research: Current trends and future perspectives. In L. S. Greenberg & W. M. Pinsof (Eds.), *The psychotherapeutic process: A research handbook* (pp. 3-19). New York: Guilford.
- Greenberger, D., & Padesky, C. A. (1995). *Mind over mood: A cognitive therapy treatment manual for clients*. New York, NY: Guilford Press.
- Griffiths, M. (2001). Online therapy: A cause for concern? *Psychologist, 14*, 244-248.
- Grohol, J. M. (2004). Online counseling: A historical perspective. In R. Kraus, J. Zack, & G. Stricker (Eds.), *Online counseling: A handbook for mental health professionals* (pp. 51-68). San Diego, CA: Elsevier Academic Press.
- Grover, F., Wu, H. D., Blanford, C., Holcomb, S., & Tidler, D. (2002). Computer-using patients want internet services from family physicians. *Journal of Family Practice, 51*(6), 570-572.
- Harris Interactive. (2002). Cyberchondriacs continue to grow in America. *Health Care News, 2*, 1-2.
- Hartley, D. E., & Strupp, H. H. (1983). The therapeutic alliance: Its relationship to outcome in brief psychotherapy. In J. Masling (Ed.), *Empirical studies in analytic theories* (pp. 1-37) Hillsdale, NJ: Erlbaum.
- Henry, W. P., Strupp, H. H., Schacht, T. E., & Gaston, L. (1994). Psychodynamic approaches. In A. E. Bergin & S. L. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (4th ed., pp. 467-508). New York: Wiley.
- Heppner, P. P., Kivlighan, Jr., D. M., & Wampold, B. E. (1992). *Research design in*

counseling. Pacific Grove, CA: Brooks/Cole Publishing Company.

- Hesketh, B. (2000). Prevention and development in the workplace. In S. D. Brown & R. W. Lent (Eds.). *Handbook of counseling psychology* (3rd ed.). New York, NY: John Wiley & Sons, Inc.
- Hester, R. K., & Delaney, H. D. (1997). Behavioral self-control program for Windows: Results of a controlled clinical trial. *Journal of Consulting and Clinical Psychology, 65*(4), 686-693.
- Hill, C. E. (1978). Development of a counselor verbal response category system. *Journal of Counseling Psychology, 25*, 461-468.
- Hill, C. E., Carter, J. A., & O'Farrell, M. K. (1983). A case study of the process and outcome of time-limited counseling. *Journal of Counseling Psychology, 30*, 3-18.
- Hill, C. E., Corbett, M. M., Kanitz, B., Rios, P., Lightsey, R., Gomez, M. (1992). Client behavior in counseling and therapy sessions: Development of a pantheoretical measure. *Journal of Counseling Psychology, 39*, 539-549.
- Hill, C. E., & Crobett, M. M. (1993). A perspective on the history of process and outcome research in counseling psychology. *Journal of Counseling Psychology, 40*(1), 3-24.
- Hill, C. E., Helms, J. E., Tichenor, V., Spiegel, S. B., O'Grady, K. E., & Perry, E. S. (1988). The effects of therapist response modes in brief psychotherapy. *Journal of Counseling Psychology, 35*, 222-233.
- Hill, C. E., Nutt, E. A., & Jackson, S. (1994). Trends in psychotherapy process research: Samples, measures, researchers, and classic publications. *Journal of Counseling Psychology, 41*(3), 364-377.

- Hill, C. E., O'Brien, K. M. (1999). *Helping skills: Facilitating exploration, insight, and action*. Washington, DC: American Psychological Association.
- Hoffman, D. L., Novak, T. P., & Schlosser, A. (2000). The evolution of the digital divide: How gaps in Internet access may impact electronic commerce. *Journal of Computer Mediated Communication, 5*, 233-245.
- Holzer, M., Mergenthaler, E., Pokorny, D., Kachele, H., & Luborsky, L. (1996). Vocabulary measures for the evaluation of therapy outcome: Re-studying transcripts from the Penn Psychotherapy Project. *Psychotherapy Research, 6*, 95-108.
- Hopps, S. L., Pepin, M., & Boisvert, J. (2003). The effectiveness of cognitive-behavioral group therapy for loneliness via inter relaychat among people with physical disabilities. *Psychotherapy: Theory, Research, Practice, Training, 40*, 136-147.
- Horowitz, M. J., Wilner, N., & Alvarez, W. (1979). Impact of event scale: A measure of subject stress. *Psychosomatic Medicine, 41*, 209-218.
- Horvath, A. O., & Greenberg, L. (1989). Development and validation of the Working Alliance Inventory. *Journal of Counseling Psychology, 36*, 223-233.
- Horvath, A. O., & Luborsky, L. (1993). The role of the therapeutic alliance in psychotherapy. *Journal of Consulting and Clinical Psychology, 61*, 561-573.
- Horvath, A. O., & Symonds, B. D. (1991). Relations between working alliance and outcome in psychotherapy: A meta-analysis. *Journal of Counseling Psychology, 38*, 139-149.
- Hsiung, R. C. (2000). The best of both worlds: An online self-help group hosted by a mental health professional. *CyberPsychology & Behavior, 3*(6), 935-950.

- Huang, M. P., & Alessi, N. E. (1996). The Internet and the future of psychiatry. *American Journal of Psychiatry, 153*(7), 861-869.
- Hufford, B. J., Glueckauf, R. L., Webb, P. M. (1999). Home-base, interactive videoconferencing for adolescents with epilepsy and their families. *Rehabilitation Psychology, 44*(2), 176-193.
- Huws, J. C., Jones, R. S. P., & Ingledeu, D. K. (2001). Parents of children with autism using an email group: A grounded theory study. *Journal of Health Psychology, 6*(5), 569-584.
- Ivey, A. E., & Ivey, M. B. (2002). *Intentional interviewing and counseling: Facilitating client development in a multicultural society* (5th ed.). Pacific Grove, CA: Brooks/Cole.
- Jerome, L. W., DeLeon, P. H., James, L. C., Folen, R., Earles, J., & Gedney, J. J. (2000). The coming age of telecommunications in psychological research and practice. *American Psychologist, 55*(4), 407-421.
- Katz, A. H., & Maida, C. A. (1990). Health and disability self-help organization. In T. J. Powell (Ed.). *Working with self-help* (pp. 141-155). Silver Spring, MD, England: National Association of Social Work.
- Kiesler, S., Siegel, J., & McGuire, T. W. (1984). Social psychological aspects of computer mediated communication. *American Psychologist, 39*, 1123-1134.
- King, S. A., Engi, S., & Poulos, S. T. (1998). Using the Internet to assist family therapy. *British Journal of Guidance and Counselling, 26*(1), 43-52.
- Kraut, R., Mukhopadhyay, T., Szczypula, J., Kiesler, S., & Scherlis, B. (1999).

Information and communication: Alternative uses of the Internet in households.

Information Systems Research, 10, 287-303.

Krol, N. P. C. M., De Bruyn, E. E. J., van Aarle, E. J. M., & van den Bercken, J. H. L.

(2001). Computerized screening for DSM classifications using CBCL/YSR extended checklists: A clinical try-out. *Computers in Human Behavior*, 17, 315-337.

Krumpnick, J. L., Sotsky, S. M., Simmens, S., Moyer, J., Elkin, I., Watkins, J., &

Pilkonis, P. A., (1996). The role of the therapeutic alliances in psychotherapy and pharmacotherapy outcome: Finds in a National Institute of Mental Health Treatment of Depression Collaborative Research Program. *Journal of Consulting and Clinical Psychology*, 64, 532-539.

Kruger, L. J., Struzziero, J., Kaplan, S. K., Macklem, G., Watts, R., & Weksel, T. (2001).

The use of email in consultation: An exploratory study of consultee outcomes. *Journal of Educational and Psychological Consultation*, 12(2), 133-149.

Kuiper, N. A., McKee, M., Kazarian, S. S., & Olinger, J. L. (2000). Social perceptions in

psychiatric inpatients: Relation to positive and negative affect levels. *Personality and Individual Differences*, 29, 479-493.

LaCrosse, M. B., & Barak, A. (1976). Differential perception of counselor behavior. *Journal of Counseling Psychology*, 23, 170-172.

Landau, B. M. (2001). Psychotherapy online in 2001: For psychotherapists new to the

Internet. *Journal of Mental Imagery*, 25, 65-82.

Lange, A., van den Ven, J., Schrieken, B., & Emmelkamp, P. M. G. (2001). Interapy.

Treatment of posttraumatic stress through the Internet: A controlled trial. *Journal of Behavior Therapy and Experimental Psychiatry*, 32, 73-90.

- Lantz, A. (2001). Meetings in a distributed group of experts: Comparing face-to-face, chat and collaborative virtual environment. *Behaviour & Information Technology*, 20(2), 111-117.
- Li, H. Z. (2002). Culture, gender and self-close-other(s) connectedness in Canadian and Chinese sample *European Journal of Social Psychology*, 32, 93-104.
- Liss, H. J., Glueckauf, R. L., & Ecklund-Johnson, E. P. (2002). Research on telehealth and chronic medical conditions: Critical review, key issues, and future directions. *Rehabilitation Psychology*, 47, 8-30.
- Lloyd, M. G. (1996). Have you had a long-distance therapeutic relationship? You will. *Ethics & Behavior*, 6(2), 170-172.
- Magaletta, P. R., Fagan, T. J., & Peyrot, M. F. (2000). Telehealth in the Federal Bureau of Prisons: Inmates' perceptions. *Professional Psychology: Research and Practice*, 31, 497-502.
- Maheu, M. M., & Gordon, B. L. (2000). Counseling and therapy on the Internet. *Professional Psychology: Research and Practice*, 31(5), 484-489.
- Mallen, M. J., (2004). Online counseling research. In R. Kraus, J. Zack, & G. Stricker (Eds.), *Online counseling: A handbook for mental health professionals* (pp. 69-89). San Diego, CA: Elsevier Academic Press.
- Mallen, M. J., Day, S. X., & Green, M. A. (2003). Online versus face-to-face conversations: An examination of relational and discourse variables. *Psychotherapy: Theory, Research, Practice, Training*, 40, 155-163.
- Mallen, M. J., & Vogel, D. L. (2002, August). Working toward online counselor training:

- Dynamics of process and assessment. In A. B. Rochlen (Chair), *Appeal and relative efficacy of online counseling: Preliminary findings*. Symposium conducted at the annual convention of the American Psychological Association, Chicago, Illinois.
- Malt, U. F. (1986). Five years of experience with the DSM-III system in clinical work and research: Some concluding remarks. *Acta Psychiatrica Scandinavica*, *73*, 76-84.
- Manhal-Baugus, M. (2001). E-therapy: Practical, ethical, and legal issues. *CyberPsychology & Behavior*, *4*, 551-563.
- Marmar, C. R., Horowitz, M. J., Weiss, D. S., & Marziali, E. (1986). The development of the Therapeutic Alliance rating System. In L. S. Greenberg & W. M. Pinsof (Ed.), *The psychotherapeutic process: A research handbook*. New York, NY: Guilford Press.
- Mehrabian, A. (1997). Comparison of the PAD and PANAS as models for describing emotions and for differentiating anxiety from depression. *Journal of Psychopathology and Behavioral Assessment*, *19*, 331-357.
- Meier, A. (2000). Offering social support via the Internet: A case study of an online support group for social workers. *Journal of Technology in Human Services*, *17*(2/3), 237-266.
- Morgan, R. D., Olson, K. R., Krueger, R. M., Schellenberg, R. P., & Jackson, T. T. (2000). Do the DSM decision trees improve diagnostic ability? *Journal of Clinical Psychology*, *56*, 73-88.
- Norcross, J. C., Hedges, M., & Prochaska, J. O. (2002). The face of 2010: A delphi poll on the future of psychotherapy. *Professional Psychology: Research and Practice*, *33*(3), 316-322.

- Norris, L., Shatkin, L., & Katz, M. R. (1991). SIGI PLUS and Project LEARN: A retrospective. *Journal of Career Development, 18*, 61-72.
- Nutt Williams, E., Judge, A. B., Hill, C. E., & Hoffman, M. A. (1997). Experiences of novice therapists in prepracticum: Trainees', clients', and supervisors' perception of therapists' personal reactions and management strategies. *Journal of Counseling Psychology, 44*, 390-399.
- Ocker, R. J., & Yaverbaum, A. J. (1999). Asynchronous computer-mediated communication versus face-to-face collaboration: Results on student learning, quality and satisfaction. *Group Decision and Negotiation, 8*, 427-440.
- O'Farrell, M. K., Hill, C. E., & Patton, S. (1986). Comparisons to two cases of counseling with the same counselor. *Journal of Counseling and Development, 65*, 141-145.
- Olaniran, B. A. (1996). A model of group satisfaction in computer-mediated communication and face-to-face meetings. *Behaviour & Information Technology, 15*(1), 24-36.
- Oliver, P., Marwell, G., & Teixeira, R. (1985). A theory of the critical mass: Interdependence, group heterogeneity, and the production of collective action. *American Journal of Sociology, 91*(3), 522-556.
- Osipow, S. H., & Spokane, A. R. (1987). *Occupational Stress Inventory manual: Research edition*. Odessa, FL: Psychological Assessment Resources, Inc.
- Pearson, Q. M. (2003). Breaking the silence in the counselor education classroom: A training seminar on counseling sexual minority clients. *Journal of Counseling & Development, 81*, 292-300.
- Peyrot, M. F. (2000). Telehealth in the federal bureau of prisons: Inmates' perceptions.

- Professional Psychology: Research and Practice*, 31(5), 497-502.
- Piaget, J. (1952). *The origins of intelligence in children*. Oxford, England: International Universities Press.
- Pomerantz, J. M. (2002). Clinical responsibility and e-therapy. *Drug Benefit Trends*, 14, 29-30.
- Ponterotto, J. G., Casas, J. M., Suzuki, L. A., & Alexander, C. M. (1995). *Handbook of multicultural counseling*. Thousand Oaks, CA: Sage.
- Ponterotto, J. G., Fuertes, J. N., & Chen, E. C. (2000). Models of multicultural counseling. In S. D. Brown and R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed.). New York, NY: John Wiley & Sons, Inc.
- Rayman, J. R., & Harris-Bowlsbey, J. (1977). DISCOVER: A model for a systematic career guidance program. *Vocational Guidance Quarterly*, 26, 3-12.
- Robbins, S. B., (1992). The working alliance. In M. Patton & N. Meara (Eds.), *Psychoanalytic counseling* (pp. 97-121). Chichester, England: Wiley.
- Robinson, P. H., & Serfaty, M. A. (2001). The use of e-mail in the identification of bulimia nervosa and its treatment. *European Eating Disorders Review*, 9(3), 182-193.
- Rochlen, A. B., Brevatas, & Zack, J. S. (in press). The on-line and face-to-face counseling attitude scales: A validation study. *Journal of Measurement and Counseling and Development*.
- Rochlen, A. B., Land, L. N., & Wong, Y. J. (in press). Male restrictive emotionality and evaluations of online versus face-to-face counseling. *Psychology of Men and Masculinity*.
- Rochlen, A. B., Zack, J. S., & Speyer, W. (2004). Online therapy: Review of relevant

- definitions, debates, and current empirical support. *Journal of Clinical Psychology*, *60*, 269-283.
- Rosenfield, M., & Smillie, E. (1998). Group counseling by telephone. *British Journal of Guidance & Counselling*, *26*(1), 11-19.
- Rounsaville, B. J., Chevron, E. S., Prusoff, B. A., Elkin, I., Imber, S., Sotsky, S., & Watkins, J. (1987). The relations between specific and general dimensions of the psychotherapy process in interpersonal psychotherapy of depression. *Journal of Consulting and Clinical Psychology*, *55*, 379-384.
- Russell, D., Cutrona, C. E., Rose, J., & Yurko, K. (1984). Social and emotional loneliness: An examination of Weiss's typology of loneliness. *Journal of Personality and Social Psychology*, *46*, 1313-1321.
- Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA loneliness scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, *39*, 472-480.
- Sampson, J. P. (1998). The Internet as a potential force for social change. In C. C. Lee, & G. R. Walz (Eds.), *Social action: A mandate for counselors* (pp. 213-225). Alexandria, VA: American Counseling Association.
- Sampson, J. P., Kolodinsky, R. W., & Greeno, B. P. (1997). Counseling on the information highway: Future possibilities and potential problems. *Journal of Counseling & Development*, *75*, 203-212.
- Sander, F. M. (1996). Couple group therapy conducted via computer-mediated communication: A preliminary case study. *Computers in Human Behavior*, *12*(2), 301-312.

- Schiano, D. J. (1997). Convergent methodologies in cyber-psychology: A case study. *Behavior Research Methods, Instruments & Computers, 29*, 270-273.
- Schlossberg, N. K. (1981). A model for analyzing human adaptation to transition. *The Counseling Psychologist, 9*, 2-18.
- Schopp, L., Johnstone, B., & Merrell, D. (2000). Telehealth and neuropsychological assessment: New opportunities for psychologists. *Professional Psychology: Research and Practice, 31*, 179-183.
- Schneider, S. J., Kerwin, J., Frechtling, J., & Vivari, B. A. (2002). Characteristics of the discussion in online and face-to-face focus groups. *Social Science Computer Review, 20*(1), 31-42.
- Seligman, M. E. P. (1995). The effectiveness of psychotherapy: The Consumer Reports study. *American Psychologist, 50*, 965-974.
- Selmi, P. M., Klein, M. H., Greist, J. H., Sorrel, S. P., & Erdman, H. P. (1990). Computer-administered cognitive-behavioural therapy for depression. *American Journal of Psychiatry, 141*, 51-56.
- Shapiro, D. E., & Schulman, C. E. (1996). Ethical and legal issues in e-mail therapy. *Ethics & Behavior, 6*(2), 107-124.
- Sharf, B. (1997). Communication breast cancer online: Support and empowerment on the Internet. *Women and Health, 26*, 65-84.
- Shaw, B. R., McTavish, F., Hawkins, R., Gustafson, D. H., & Pingree, S. (2000). Experiences of women with breast cancer: Exchanging social support over the CHES computer network. *Journal of Health Communication, 5*, 135-159.
- Shernoff, M. (2000). Cyber counseling for queer clients and clinicians. *Journal of Gay &*

- Lesbian Social Services*, 11(4), 105-979.
- Spielberger, C. D., Gorsuch, R. L., & Lushene, R. (1970). *State-Trait Anxiety Inventory Manual*. Consulting Psychologists Press, Inc.
- Sproull, L., & Kiesler, S. (1986). Reducing social context cues: Electronic mail in organizational communication. *Management Science*, 32, 1492-1512.
- Stein, D. J. (1997). Internet addiction, Internet psychotherapy. *American Journal of Psychiatry*, 154(6), 890.
- Stevens, A., Doidge, N., Goldbloom, D., Voore, P., & Farewell, J. (1999). Pilot study of televideo psychiatric assessments in an underserved community. *American Journal of Psychiatry*, 156(5), 783-785.
- Stiles, W. B., & Snow, J. S. (1984). Counseling session impact as viewed by novice counselor and their clients. *Journal of Counseling Psychology*, 31, 3-12.
- Stofle, G. S., & Harrington, S. (2002). Treating addictions on the Internet: Can it be done? A dialogue. *Journal of Social Work Practice in the Addictions*, 2, 85-92.
- Stout, C. (1991). A methodological approach to differential diagnostics. In K. N. Anchor (Ed.), *The handbook of medical psychotherapy: Cost effective strategies in mental health* (pp. 141-152). Ashland, OH: Hogrefe & Huber Publishers.
- Stricker, G. (1996). Psychotherapy in cyberspace. *Ethics & Behavior*, 6(2), 175-177.
- Strong, S. R. (1968). Counseling: An interpersonal influence process. *Journal of Counseling Psychology*, 15, 215-224.
- Sue, D. W., Carter, R. T., Casas, J. M., Fouad, N. A., Ivey, A. E., Jensen, M., LaFromboise,

- T., Manese, J. E., Ponterotto, J. G., & Vazquez-Nutall, E. (1998). *Multicultural counseling competencies: Individual and organizations development*. Thousand Oaks, CA: Sage.
- Suler, J. (2001). Assessing a person's suitability for online therapy: The ISMSO clinical case study group. *CyberPsychology & Behavior*, 4(6), 675-679.
- Thompson, L. F., & Coovert, M. D. (2002). Stepping up to the challenge: A critical examination of face-to-face and computer-mediated team decision making. *Group Dynamics: Theory, Research, and Practice*, 6(1), 52-64.
- Tidwell, L. C., & Walther, J. B. (2002). Computer-mediated communication effects on disclosure, impressions, and interpersonal evaluations: Getting to know one another a bit at a time. *Human Communication Research*, 28(3), 317-348.
- Tracey, T. J., & Dundon, M. (1988). Role anticipations and preferences over the course of counseling. *Journal of Counseling Psychology*, 35, 3-14.
- VandenBos, G. R., & Williams, S. (2000). The Internet versus the telephone: What is telehealth, anyway? *Professional Psychology: Research and Practice*, 31(5), 490-492.
- Wald, F. D., & Mellenbergh, G. J. (1990). The short version of the Dutch translation of the Profile of Mood States. *Nederlands Tijdschrift voor de Psychologie*, 45, 85-90.
- Walstrom, M. K. (2000). "You know, who's the thinnest?": Combating surveillance and creating safety in coping with eating disorders online. *CyberPsychology & Behavior*, 3(5), 761-783.
- Walther, J. B. (1993). Impression development in computer-mediated interaction. *Western Journal of Communication*, 57, 381-398.

- Walther, J. B. (1995). Relational aspects of computer-mediated communication: Experimental observations over time. *Organization Science*, 6(2), 186-203.
- Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication Research*, 23(1), 3-43.
- Walther, J. B., & D'Addario, K. P. (2001). The impacts of emoticons on message interpretation in computer-mediated communication. *Social Science Computer Review*, 19(3), 324-347.
- Wampold, B. E. (2000). Outcomes of individual counseling and psychotherapy: Empirical evidence addressing two fundamental questions. In S. D. Brown and R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed.). New York, NY: John Wiley & Sons, Inc.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.
- Weizenbaum, J. (1976). *Computer power and human reason*. New York: Freeman.
- Winter, K. A., & Kuiper, N. A. (1997). Individual differences in the experience of emotions. *Clinical Psychology Review*, 17, 791-821.
- Winzelberg, A. (1997). The analysis of an electronic support group for individuals with eating disorders. *Computers in Human Behavior*, 13(3), 393-407.
- Winzelberg, A. J., Eppstein, D., Eldredge, K. L., Wilfley, D., Dasmahapatra, R., Dev, P., & Taylor, C. B. (2000). Effectiveness of an Internet-based program for reducing risk factors for eating disorders. *Journal of Consulting and Clinical Psychology*, 68(2), 346-350.

- Wolf, A. (2000). Emotional expression online: Gender differences in emoticon use. *CyberPsychology & Behavior, 3*(5), 827-833.
- Wright, J., & Chung, M. C. (2001). Mastery or mystery? Therapeutic writing: A review of the literature. *British Journal of Guidance & Counselling, 29*, 277-291.
- Wright, J. H., & Wright, A. S. (1997). Computer-assisted psychotherapy. *Journal of Psychotherapy Practice and Research, 6*(4), 315-329.
- Wright, J. H., Wright, A. S., Salmon, P., Beck, A. T., Kuykendall, J., Goldsmith, L. J., Zickel, M. B. (2002). Development and initial testing of a multimedia program for computer-assisted cognitive therapy. *American Journal of Psychotherapy, 56*(1), 76-86.
- Yager, J. (2001). E-mail as a therapeutic adjunct in the outpatient treatment of anorexia nervosa: Illustrative case material and discussion of the issues. *International Journal of Eating Disorders, 29*(2), 125-138.
- Young, K. S. (1996). Psychology of computer use: XL. Addictive use of the Internet: A case that breaks the stereotype. *Psychological Reports, 79*, 899-902.
- Young, K. S., & Rogers, R. C. (1998). The relationship between depression and Internet addiction. *CyberPsychology and Behavior, 1*, 25-28.
- Zabinski, M., Wilfley, D. E., Pung, M. A., Winzelberg, A. J., Eldredge, K., & Taylor, C. B. (2001). An interactive Internet-based intervention for women at risk of eating disorders: A pilot study. *International Journal of Eating Disorders, 30*(2), 129-137.
- Zelvin, E., & Speyer, C. M. (2004). Online counseling skills part I: Treatment strategies and

skills for conducting counseling online. In R. Kraus, J. Zack, & G. Stricker (Eds.), *Online counseling: A handbook for mental health professionals* (pp. 164-180). San Diego, CA: Elsevier Academic Press.

Zimmerman, D. P. (1987a). A psychological comparison of computer-mediated and face-to-face language use among severely disturbed adolescents. *Adolescence*, 22(88), 827-840.

Zimmerman, D. P. (1987b). Effects of computer conferencing on the language use of emotionally disturbed adolescents. *Behavior Research Methods, Instruments, & Computers*, 19(2), 224-230.

Zimmerman, D. P. (1989). Electronic language: A study of word processing by emotionally disturbed children and adolescents in residential treatment. *Behavior Research Methods, Instruments, & Computers*, 21(2), 181-186.