Clinical Counselors and the Internet: A National Survey Evaluating the Impact of the Internet on the Counseling Profession

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Abstract

The purpose of this exploratory dissertation was to gather data regarding information technology and the internet as it related to clinical counselors. The findings have the potential to add to the sparse information base regarding use of technology and the internet in clinical counseling practice. The data for this dissertation was collected by surveying a national sample of 534 clinical counselors who were recruited from state clinical counseling organizations. The survey instrument was done on-line and disseminated via the internet. Of those recruited, 215 counselors were used in the final data analysis. The survey instrument was designed to assess a) the extent to which counselors are knowledgeable of computer technologies, b) the extent to which their clients make use of the internet, and c) the extent to which they believe computer technology contributes to their professional practice.

The study found that clinical counselors in this sample rate themselves highly in terms of internet competence and their knowledge of information technologies. However, despite these high rates of knowledge, counselors are not implementing the internet in their counseling practices at very high rates. This research suggests that clients are increasingly becoming more internet savvy and are using the internet in their own mental health research. As such, counselors need to begin to implement internet components into their practice when appropriate.
Dedication

To my beautiful wife, Chrissy, you have supported me with love and dedication for which I am eternally grateful. I love you and cannot thank you enough for your caring touch that has helped me through this process. You really are an amazing companion.

To my wonderful mother, Sina, who has been a lifelong inspiration for me. Your gentle demeanor and kindness has touched the lives of many, and the love that glows from you has always warmed my heart. You have taught me many lessons and I have become a better person by emulating your remarkable spirit. I love you very much.

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Chapter 1- Introduction

Rationale

With technological advances in society comes a need for paralleling advances in the counseling profession. The expanse of the information superhighway has led to an almost overwhelming amount of information, which can lead to interesting dilemmas for counselors. For example, on one hand, computers afford clients opportunities to gain information about a plethora of topics related to a presenting concern; yet, any person can post any kind of information on the web, so client information may not always be accurate or be in the best interest of the client. Inevitably, clients have access to thousands of web-sites related to their specific presenting issue, but it is another question whether this information is utilized, or whether this information has been processed appropriately to help the client.

In many ways, the amalgamation of counseling with information technology is a needed component to the future of the counseling profession. Using technology, clients can access information or resources, find support, and enjoy the freedom to explore themselves and their relationships with others (Bowman & Bowman, 1998). Nonetheless, information gathered over the internet needs to be processed through a counseling relationship to best serve the client. Information technology cannot, on its own, entirely supplant counseling for most individuals. On the flip side, counseling can greatly benefit by incorporating information technology.

Interestingly, little peer-reviewed information exists related to how counselors perceive their own clients use of the internet and information technologies. It is perceptions of clients that mold and guide the counseling process, and the profession could be assisted by including information gathered from technological sources, both from the perspective of the client and the perspective of the counselor. By gaining some insight into how counselors perceive their current clients in relation to information technology, how counselors utilize information technology themselves, and an understanding of the symbiotic relationship between the two as it relates to the process of
counseling, one can have a greater understanding of the role of information technology in the counseling profession.

Gathering information from clinicians about their perspectives on their clients use of information technology will give some perspective to what kind of information technology is being used and what is being reported to counselors. From this information, clinicians can gain a better understanding of their potential clients, and how computers can be a significant tool to help both the counselor and the client.

An understanding of the competencies of current counselors with respect to technology is important. By assessing the basic knowledge of clinicians with respect to technology, one can determine what areas of technological competencies are important in actual counseling practice. Correlational data showed how counseling technology competence relates to one’s own use of technology in practice, and one’s perceptions of their client’s use of technology.

As life progresses further into the new millennium, computers will increasingly become part of the human culture. As such, computers will continue to affect clients who come in for counseling, and there will undoubtedly be a proliferation of computer usage across clientele. For example, in 1998, only 37% of households had a computer and 19% were connected to the Internet (NTIA, 1998); but more recent data indicate that over 50% of households own a computer and over 60% percent of those owners are connected to the internet (Rainie & Kobut, 2000). In addition, 60% of people online report that the internet is an important part of their daily lives compared to 32% only 3 years ago. These numbers are significantly increasing and will continue to grow as computers become less expensive and more accessible to the public at large. In fact, the U.S. Department of Labor, Bureau of Labor Statistics (1999) reports increases in computer ownership in all areas of education, age, race, income and region. These statistics indicate that computer technology and the internet are becoming an integral part of the human culture.
As the internet becomes a more important and salient component of life, internet usage as a means of relating to a client increases. This means that clients will likely be more informed about information on the World Wide Web related to mental health, and counselors, in turn, have a need to be informed about internet information and how it may relate to a client’s treatment. Indeed, incorporating technology into the mental health profession is a profound paradigmatic shift facing the counseling profession (Gore, Leuwerke & Krumboltz, 2002).

The computer age is on the verge of major expansion, both in the workplace and at home. Competition in the market of internet providing, internet advertising, and internet business alone will spark interest in making computers accessible to as many people as possible. Information technology is becoming a significant part of life (Hughes, Ebata & Dollahite, 1999), and computers will start to change the type of clients we see in the counseling office. Due, in part, to access of large amounts of information available over the internet, clients can become more informed about specific issues related to counseling, diagnoses, medications, and overall mental health treatment. Present and future clients are more likely to come to a counseling setting with preconceived notions about their presenting problem and what needs to be done about it. Ultimately, technology will have an impact on the counseling relationship.

As the expansion of the digital age proceeds, its impact on counseling would seem to warrant investigation. Information on how counselors utilize computer technology in their practice, what kind of information is researched over the internet by both the client and the counselor, what counselor’s perceptions are of their client’s use of the internet, how these perceptions have an impact on counseling, and how internet information ultimately effects the counseling process are all questions that can add to an appreciation of the impact of computer technology on the counseling profession. In addition, the perceived impact of computers needs to be assessed in relation to clients.

Inevitably, cultural and sociological aspects of life are going to change. Keeping up with change in our society gives a chance at understanding life and the world in which we
live. Because computers will be an integral part of change in the next millennium, it is important to examine their potential impact on the counseling profession. Better understanding of computers in relation to counseling can help provide the basis for a smoother transition for counselors into the expanding world of information technology.

**Problem Statement**

The problem is that beyond the actual use of the internet as a medium for counseling, little peer-reviewed research has been empirically considered related to information technology and its impact upon clinical counseling practice. Furthermore, information technology does influence and will likely modify how counselors interact with their clients, so research in this area is important. It seems that the expanse of the internet into daily lives has happened at such a quick pace, that research has fallen behind. In a field that interacts with and helps clients to alter their daily lives, neglecting a potentially salient aspect of that life, such as information technology, can potentially be problematic to the counseling profession.

**Purpose**

In an endeavor to continue to expand the small amount of literature related to information technology and its impact on clinical counseling, this researcher investigated several areas in an exploratory effort to access information related to this topic. As the promulgation of computers continues in society, the impact will inevitably trickle down to actual practice and the counseling process. For example, a client may come to a counseling session with a wealth of knowledge accessed via the internet related to their symptomology, saying, “I must be bi-polar, can you help me?” It is then the counselor’s responsibility to process that wealth of information as it relates to the client specifically to ascertain the accuracy of the self-diagnosis. And, beyond that, it may be equally important to process the information gathering techniques used via the internet to evaluate the pros and cons and how to utilize the information correctly. Furthermore, since the client has already demonstrated internet proficiency, the counselor could then recommend specific ways of using the internet for further interventions in that client’s own mental health treatment. As the expanse of information accessible over the internet
grows, clients will increasingly expect to utilize this kind of information to help with their concerns, as demonstrated in the aforementioned example.

The proliferation of computers and their increased use in the home has been the hallmark of our recent society. Computer use in business is expanding at a quick pace and computer use in the home is paralleling that expansion. As computer technology increasingly influences lifestyles, conceptualizations of clients in the counseling office will also need to change. Utilizing information technology can become an important part of treatment planning for a client who is perceived to have good technological skills by a counselor. In effect, little peer-reviewed research has been done on counselors’ perceptions of their client’s use of technology and what questions they may even ask to get at that kind of information.

Exploring a client’s history of accessing information via computer technology could become an integral part of counseling, especially since computers can so readily be used for gathering information regarding a mental illness. Furthermore, since the internet can be used as a support network by accessing support groups on-line in many different topic areas, the computer may be a primary support network for a client. Already, two important aspects of the counseling relationship, social support and knowledge about one’s own mental illness, could be profoundly changed by utilizing a computer. And this may only be the tip of the proverbial iceberg. The dangers of the internet also loom; for example, a client may self diagnose, then access a web-site to get medication they have read will help them, and unfortunately, there are ways to get some medications without even seeing a doctor or a psychiatrist!

Although the potential of technology to play a role in counseling has been recognized (Harrison & Stephen, 1996), the day to day work of counselors seems to be unchanged (Chandras, 2000). On the contrary, it seems that subtle changes have already been taking place in the counseling office related to information technology, but research projects to date have not targeted these subtle nuances. By exploring potential topic areas related to the subtle changes taking place in the counseling profession as a result of
information technology, this dissertation sets out to expound upon those potential topic areas, gather some information regarding them, summarize those findings, and disseminate that information to clinical counselors via publication about information technology in clinical practice. Once these subtle nuances have been summarized, perhaps more counselors will feel comfortable incorporating technology into their own practices.

To gain access to the subtle concerns related to information technology in counseling, several research questions were targeted in three different categories-

**Demographics**
1. What are the current self-reported technological and internet competencies of clinicians in practice, and to what extent do counselors use the internet in their practice?
2. What demographic variables are associated with the utilization of the internet in clinical practice?

**Perceptions of client’s use of the internet related to clinical interactions**
3. What are counselors’ perceptions of their clients’ knowledge and use of the internet, as it relates to the clients’ own mental health and treatment?
4. How might perceptions of a client’s utilization of the internet be related to that counselor’s own knowledge and use of the internet?

**Utilization of the internet in clinical practice**
5. How do counselors perceive the impact of the internet on clients in general or to the counseling profession as a whole?

In answering the research questions, this study was intended to be primarily exploratory and descriptive in nature. The study looks at characterizing the chosen sample of counselors by describing them in relation to computer technology and by exploring the counselor’s perceptions of their clients in relation to the internet. The results can then give insight into clinicians in the sample, and can be a springboard for future research targeting a specific area pinpointed in this description.
Clinicians can in turn use the information from this study to determine the significance of technology to their own practice. Perhaps this study will shed light on areas otherwise not illuminated to practicing clinicians so they may incorporate changes to their own counseling practice. A better understanding of future clientele as they relate to technology can lead to a better form of treatment utilizing untapped resources.

In addition, counselor education programs can evaluate the teaching of information technology as it relates to future practice. For example, this study showed that technological competency is correlated to utilizing technology in practice, and clients are shown to have an increasing need for technology to be incorporated into practice, so programs can focus more attention to this area. Perhaps classes will have new requirements utilizing internet researched topics for core curricula.

**Definition of terms**

This is a comprehensive list and explanation of the terms used in this study to help elucidate meaning and simplify understanding.

- **computers**- for the purposes of this study, computers will refer to home computers or personal computers, including laptops or notebooks, that are internet accessible via a modem, DSL or cable modem
- **laptops or notebooks**- portable computers
- **clinical counselors**- people, who by self report, see at least 5 clients a week in a face to face session and who currently meet the requirements for (license eligible) or are currently holding the title of National Certified Counselor and/or Licensed Professional Counselor in their state of practice
- **clinicalicians**- will be used interchangeable within this paper with clinical counselors
- **clients**- people who are currently seeking treatment from a counselor as mentioned above
- **information technology**- gathered information from a technological source, such as the internet or various computer software programs
- **internet**- millions of data pages, created by separate users, that are linked into one format accessible to anyone with access to the internet via a computer connection
technology - for the purposes of this study, technology will refer to personal computers and the accessibility of the internet on those computers

technological competency - knowledge related to utilizing personal computers

hyperlink - a simple text or graphic that allows movement between web-pages at the click of a mouse (for example, a hyperlink can be sent in an email to allow the email recipient instant access to a particular website)

World Wide Web - what the www stands for in most web page addresses; in essence another term for the internet

URL - a uniform resource locator, more commonly referred to as an internet address; each individual website has a unique URL

website and webpage - these words will be used interchangeably and refer to a particular set of data and graphics posted to the internet by a specific user (or group of users)

Limitations

This study was conducted using an internet survey, which by design is non-random. The literature suggests that non-randomness occurs by the fact that respondents must have access to or own a computer (Swoboda, Meuhlberger, Weitkunat, & Schneeweiss, 1997). By design, respondents were already more technologically inclined because they had to access technology to complete the survey, and as such, the survey was not completed by non-computer owners, who could still provide valuable insight into perceptions of their client’s use of technology. Furthermore, participation in the study was by choice, and the very people who chose to participate were clinicians who were interested in technology and how it may relate to their clinical practice. However, most clinicians were at least linked to email and had some access to computers in some domain.

Because access to clinician’s clientele as subjects to be surveyed is difficult, information about client’s use of technology was through the clinician’s perceptions. Perceptions are inherently biased based on a lot of uncontrollable variables. Accessing information on technology uses of clients nationwide must be done by perception for ease of the study. However, analysis of the data included a counselor’s use of technology and
their competencies related to technology, and one can determine through analysis if this is a contributing factor to perceptions of client’s use of technology.

Summary

Researchers can no longer ignore the impact of home computers and information technology on the counseling profession. The growth of information technologies, such as the internet is profound. It is not in the distant future that the internet will be one of the most significant introductions to society of all time, it is now. In fact, teenagers and young children are utilizing the computer and the internet far more than their parents, and often know more about computers than their parents (Greene, 2000). It is this younger generation that is the future of our society, and information technology will be an integral part of this future; mainly because this generation has always had the internet as a source of information. Counselors will fall behind to other professions if this resource is not developed to its fullest potential in terms of clinical work, and this study will act as a springboard for exploring information related to information technology and its impact on clinical counseling.
Chapter 2: Literature Review

Just a few years into a new millennium, technological advances related to computers and information technologies have continued to grow at exponential rates inundating life as we know it. The growth of information technology has made a profound impression on the way we interact with one another, the way we gather information, the way we learn, and the way we conduct our daily lives. Millions of Americans regularly use the internet, with more and more people joining each day. This proliferation of computer use and limitless access to information at our fingertips must be embraced by the counseling profession, and the counseling literature is only just starting to incorporate such ideas.

The current literature related to counseling and psychotherapy has just begun to scratch the surface of the impact of technology on the profession. In fact, the small amount of technologically related literature focuses primarily on technological use within counselor education programs or conducting on-line therapy. Lesser information is available suggesting the impact of technology on clinical counseling practice done in the traditional face to face format or the impact of technology on clients.

Gore, Leuwerke, and Krumboltz (2002) suggest that it is time for a paradigm upgrade for counseling and psychology. In fact, they suggest that rapid advances in computers and other communication technologies represent one of the most profound changes and challenges facing mental health today, and future counselors will be better equipped to provide services to clients whose lives are enriched and complicated by technology only if they are prepared to do so. A fundamental understanding of technology’s impact upon the profession begins with a historical overview.

Technology in the Counseling Profession: A Historical Overview

Granello (2000) provides an interesting overview of the relationships of computer technologies and counseling. As he notes, the computer was born in the 1940’s, but they were very expensive, large computers occupying entire rooms. These computers were
used primarily by the government and large companies as mainframes for data analysis. Smaller versions of the computer with more user friendly programming capabilities started to become available in the early 1960’s. With these more user friendly computers now on the market, wider interest in computers and their application to counseling started. One example of an early technological endeavor into psychotherapy, called ELIZA, is still available in modified format on the internet (http://www-ai.ijs.si/eliza-cgi-bin/eliza_script). This is a form of artificial intelligence where you type in a query, such as “I feel depressed”, and the computer responds with a person-centered type of response like “Do you often feel depressed”; it continues with “please go on” responses when no others are appropriate. Although this is quite interesting and kind of fun to do for a while, it is clear that the computer lacks the ability to become the therapist. This is the historical predecessor to utilizing technology in practice.

Introductions of microcomputers and microchips (those tiny little components inside your computer right now) began in the late 1970’s and early 1980’s, and the computer revolution in relation to hardware began. These newer computers were not only smaller, but they had the power of their enormous predecessors. These smaller more powerful machines opened the door for technology to have an impact on many different professions, including psychology, counseling, and even family therapy (Granello, 2000).

Two early examples in the field of psychology illustrate computer technology in practice. Wagman and Kerber (1984) developed a “dilemma counseling system” named PlatoDCS which helped clients make a decision between two adverse consequences. Any client unable to make a choice would go through a process of weighing out pros and cons posed by the program. Selmi and colleagues (1982) developed MORTON in relation to depression. The program identified cognitions that lead to feelings of depression. Again, these psychological experiments laid the foundation for technology’s move into the counseling arena.

In 1985, Charles Figley edited a special edition of The Journal of Psychotherapy & the Family that had as its focus the topic of computers and family therapy (Figley, 1985).
In his introduction, Figley wrote of the impact of computers on life, the family and psychotherapy. “Even today, computers impact nearly every facet of our life, including the intimate environment of our home.” (p. 2). The home computer affords the ability to generate income, do banking, play games, and become educated. Figley suggests that the family had become more autonomous and powerful as a result of the computer. Furthermore, Figley suggested that the number of families with computers had increased and would continue to increase, emphasizing their importance to family therapy interventions and topics of discussion. Even then, in 1985, before the expansion of the information superhighway, researchers understood the potential impact computers would have on our society and the actuation for research in the field.

In 1984, Counselor Education and Supervision ran a special issue on the topic of technology in counseling. The issue focused on how technology would be an important part of the counseling future. The issue led to interesting discussions about the viability of technology in the profession, bringing up later arguments of training and expense (Lambert, 1988).

Culnan and Markus (1987) described an argument against computer mediated communication. They suggested that multiple cues are reduced when utilizing technology, and referred to this as “a reduced cues theory”. The theory postulated that computer mediated communication filters out important tenets of communication that are present in face to face communication, such as non-verbal cues. E-mails and chat-rooms in general had fewer available cues, because face to face contact had the potential to utilize all five of the senses. Whittaker (1995) supported the reduced cue theory saying that the subtleties of communication (glances, side conversations, nuances in cue retrieval through non-verbal interactions, and initiation of opportunistic communication) are less likely to occur with computer mediated conversation. Debates against computer technologies’ importance in counseling practice had begun.

Granello (2000) suggested that arguments about viability, expense, training, and understanding, such as the aforementioned examples, led to a sharp decrease in articles
published about computers and technology. From the late 1980’s to the early 1990’s, computer related counseling literature dropped significantly. It seemed that the counseling profession had written off computers use in therapy and computers were no longer cutting edge, but were simply a distraction and were used by only a select few with high technological skills. Little did they know, but the information superhighway known as the World Wide Web was starting to take shape from its earlier predecessor, the internet.

The internet started as a way for several military individuals to pass information to one another over a connected server. In the early to mid 1990’s, professional businesses began to explore the benefits of sharing ideas via connected servers. Once data showed that the internet could become an excellent business tool, especially in marketing, the World Wide Web was created. The term internet and World Wide Web are now used interchangeably and the literal explosion of information has been remarkable in just 8-10 years time. This explosion of data is referred to as the information superhighway which now includes video and audio in addition to text; simultaneous video exchange; handheld remote access to the internet; interactive video, audio and text with multiple users; and voice and handwriting recognition, to name a few. All of these newer technologies now available were seen as future capabilities just 5 years ago (Sampson, 1997). The information superhighway has added a completely new variable to the use of technology in counseling. The interest in the topic has slowly started to regain shape in the literature with a new twist in that the use of technology has moved from a small elite group to a sizeable cohort (Granello, 2000).

**Technology in Daily Life**

The daily lives of individuals are undergoing complex changes resulting from the growth of technology in our society (Gore, Leuwerke, & Krumboltz, 2002). “Technology has become an integral part of virtually every aspect of the human experience” (2002, p.848). Technology has had a profound impact on daily life (Hohenshil, 2000). Estimates suggest that 150 million Americans regularly use the internet and approximately 55,000 US citizens join the on-line world each day (UCLA
Center for Communication Policy, 2000); the computer industry almanac (Petska, 1999) projects almost 490 million internet users by 2003; and the United States had more than 132 million internet users at year-end 2000. Although estimates vary somewhat, technology and the internet are undoubtedly important components to daily functioning for millions of people.

Rowan Wakefield (1985) wrote of the impact of computers on life and the need for investigation related to psychotherapy. Wakefield argued for filling the knowledge gap between the potential of the computer and what is known and less used of that potential for psychotherapists. Arguments for more cohesive research on computers were made and justified by the computer revolution of the time. Wakefield illustrated the large numbers of books on computers, such as how to use computers for business, or how to use computers in general, but indicated that only a small amount of information on computers and families, or computers and psychotherapy existed. Wakefield’s chapter suggested that computers empower individuals in a variety of ways, and ultimately changed interpersonal relationships. He goes on to argue that empowerment can be done in the psychotherapeutic relationship when technology is used. “Continuing family and societal changes suggest an urgent need for much greater understanding of the impact of home computer use on families and psychotherapy” (Wakefield, 1985, p. 19). The profound impact of computers to life added a new dimension with the expanse of the information superhighway, not even conceived at this time.

Robert Hughes (1999) and colleagues wrote about life in the information age and addressed the need for further research on computers and their impact on daily life. They questioned who is using this technology, how is it being used, and who is not using this technology. The authors mentioned the “digital divide” which separates computer users from non-users. Rural poor, rural and central city minorities, young households, and female-headed households are less likely to have access to computers (Hughes et al., 1999), but these numbers are changing and the digital divide appears to be rapidly closing. For example, the U.S. Department of Labor, Bureau of Labor Statistics (1999) reports increases in computer ownership in all areas of education, age, race, income and
region. These statistics indicate that the internet is becoming an integral part of the human culture.

In a study conducted by The Pew Internet & American Life Project, researchers examined internet use and looked at how specific internet use affected life and communication (Rainie & Kobut, 2000). Furthermore, the study looked at gender differences in the use of internet technology. The researchers found that a surge of women had gone online within the last 6 months, leading to gender parity in the internet population. The report found that 55% of internet users said that email exchanges had improved their connections with others, but despite the increased connections, there was not a feeling of increased emotional connectedness. In fact, 20% felt that email was too impersonal to discuss burdensome material (the report does not define burdensome material). Applying percentages to numbers of people on the internet, the report found that 26 million Americans had started communicating via email with a family member with whom they had little previous contact; 24 million had used the Web to locate family and friends with whom they had lost touch; 16 million said they had learned more about their interpersonal relationships since being online; and 30 million had at least one family member with a website. The study also provided evidence to dispel the notion that the internet isolates a person- “This survey provides clear evidence that email and the Web have enhanced users’ interpersonal relationships- results that challenge the notion that the Internet contributes to isolation.” (p. 20). This report showed that the internet is a salient component to daily life and an important positive resource tool for social support.

In contrast, some authors argued that computer technology could also detrimentally affect individuals. The addition of a computer in the family home increased time spent alone by 23% (Venkatesh & Vitalari, 1985), and tended to take time away from sleeping and family interaction (Venkatesh & Vitalari, 1987); and these were numbers found before the enormous expanse of the information superhighway. For example, one article suggested that computers could add a new dimension to the individualization of early marriage and complicated a couple’s quest for joint time together, simply because the
computer and the internet were tools that were used by individuals and utilized a lot of individual time (Watt and White, 2000).

Jennifer Bremer and Paula Rauch (1998) investigated children and computers and the associated risks and benefits. In an arena that allows the posting of any information, the web can be a place that is both healthy and risky for children. Children can be easily exposed to inappropriate material or be preyed upon in chat rooms by older predators. It is crucial for parents to be involved in their children’s online experiences. Chat rooms can provide a safe environment for children to develop socially without the anxiety of face to face contact. The practice of these social interactions can foster positive development and increase self-esteem. The authors addressed these issues about the possible benefits and risks to children.

The internet has an impact on children (Bremer & Rauch, 1998), on women (Maheu, 1999), on students (Owen & Weikel, 1999; Casey, 1995; D’Andrea, 1995), on families (Hughes, Ebata, & Dollahite, 1999; Smith, 1999), on marriages (Sagar & Jencius, 2001; Derrig-Palumbo, 2002), and on many individuals (Rainie & Kobut, 2000). Representations of the salience of computers and information in today’s lifestyles surface daily. As computers continue to become readily accessible and less expensive, more and more people will be affected by this technology in many different ways. Daily, millions of people visit the World Wide Web, creating on-line associations (Wysocki, 1998). Relationships once formed in only the traditional face to face format now include a new genre, interpersonal relationships mediated by a computer (Kraut et al., 1998). In fact, computer mediated communication (CMC) is a term coined and used in the literature (Jerome & Zaylor, 2000). These relationships have implications for counselors who work to support a variety of individuals, couples, and families (Jencius & Sagar, 2001). Computer technology is not a future reality, it is a present reality, and technology expanses are not going to slow done. Counselors need to catch up with the overwhelming growth of technology by at least incorporating some aspects into clinical interactions.
Technology in Counselor Education

The future of the counseling profession can be molded by counselor education programs, which means the emphasis placed on technology in the classroom can dictate the direction of technology in the future of counseling. “Counselor training should provide the technical skills and theoretical knowledge essential to integrate technology into counselor’s work with all students, school personnel, parents, colleagues, and the community” (Hartman, 1998 as cited in Chandras, 2000, p. 224).

Chandras (2000) expected that goals of technology-enhanced counseling training should follow three guidelines-

1. Advance a vision of how information technology is used as an essential tool by helping counselors in their work.
2. Extend counselors understanding of the productivity demands made on counselors and of the potential tools that facilitate productivity.
3. Rethink how counselors and other helping professionals work in light of available information technologies.

She goes on to say that counselor training must introduce technology and illustrate how electronic tools can increase productivity. Chandras argued that counselor competence in technology will have a direct bearing on counseling services received by future clientele.

The Association for Counselor Education and Supervision (ACES) had recommended 12 technical competencies through their Technology Interest Group Network (1999)-

1. Be able to use productivity software to develop web pages, group presentations, letters and reports.
2. Be able to use such audiovisual equipment such as video recorders, audio recorders, projection equipment and playback units.
3. Be able to subscribe to, participate in, and sign off of counseling-related listservs.
4. Be able to access and use counseling-related CD-ROM databases.
5. Be able to use email.
6. Be able to use computerized statistical packages.
7. Be able to use computerized testing, diagnostic, and career-decision-making programs with clients.

8. Be able to help clients search for various types of counseling-related information about careers, employment opportunities, education and training opportunities, financial assistance/scholarships, treatment procedures, and social and personal information.

9. Be knowledgeable of the legal and ethical codes which relate to counseling services via the internet.

10. Be knowledgeable of the strengths and weaknesses of counseling services provided via the internet.

11. Be able to use the internet for finding and using continuing education opportunities in counseling.

12. Be able to evaluate the quality of internet information.

The listed competencies reflected an overall important understanding of technology for future counselors to ensure they were ready to work in a rapidly, technologically advancing world.

In an attempt to evaluate current counselor educators in regard to the aforementioned technological competencies, Myers and Gibson (2000) asked members of ACES to self evaluate themselves in survey format with the following Likert scale: 1- no competence in this area; 2- a little competence in this area; 3- about average competence; 4- above average competence; and 5- very competent. The survey was answered by 92 people, and 73 were counselor educators. The highest level of self assessed competency were obtained for using email, accessing listservs, and using audiovisual equipment; and the lowest level of self-assessed competencies were obtained for knowledge of web-counseling, using computer statistical packages and using computerized testing. Also near the bottom was the ability to use software to design web-pages. An overwhelming majority of the respondents said they actively seek opportunities to develop technological skills. These numbers show that technology is an important component of current counselor’s knowledge, but shows little about implementation in clinical practice.
Technology and School Counselors

Casey (1995) presented several ideas for school counselors to incorporate technology into their clinical interactions with their students based on their student’s developmental needs and he discussed results of such approaches. Several examples are given-

1. Developmental needs for 10-year old children suggest that friends are extremely important to children at this age, so Casey suggests starting a technology club. Seven students identified with poor peer social skills joined the club reporting higher self esteem on post test scores when compared to pretests.

2. 11-year old children like to hear and tell stories about themselves and others. The researcher suggests a program called Hyperstudio which allows children to achieve such activities by recording their own voices. The researcher found favorable responses from the children regarding the activity.

3. 12-year old students have a growing desire and ability to complete independent work and talk in smaller groups such as dyads. Having the children participate in on-line pen pals with other 12 year olds from a different school was an interesting suggestion.

Casey also suggested using appealing software on your computer to demystify the counselor’s office by causing cognitive dissonance- a student will want to come see a counselor with appealing software even if they feel like seeing the counselor may be uncomfortable. Casey indicated that acceptance of new technologies will occur on a developmental basis across the counseling profession. A shift toward technology is evident in the way young people learn and today’s counselors must accommodate such changes (1995).

The potential of counselors to incorporate technology is high (Harrison & Stephen, 1996) but the day to day work of counselors appears unchanged (Chandras, 2000). Myrick and Sabella (1995) indicated that the school counselor population tends to be made up of personality types who are wary of technology. They suggested that even after training, frequently most return to traditional modalities for counseling and disregard technology. Howell (1992) investigated computer use for school counselors and found-
1. Counselors tend to shy away from computers.
2. There is a solid core of counselors who use computers, but mainly for administrative purposes.
3. Financial help is not always received by counselors who might want to incorporate technology in their departments.

It is evident that counselors understand the potential impact of technology on the profession, and may even be technologically competent, but traditional modes of counseling remain unchanged by the vast majority of school counselors.

A study by Owen and Weikel (1999) provided some evidence to concur with earlier findings of the underutilization of technology by the school counselor. They surveyed 200 elementary, middle, secondary and vocational school counselors. The survey results indicated that computers were primarily used for mundane record keeping/scheduling tasks rather than from activities directly related to counseling. Over 68% of respondents said they had not implemented computers as much as they would have liked and around 47% said their own lack of computer training or skills had limited their integration of computers. The researchers suggested that computers represent a resource that is not being used to its full advantage by the school-based practitioners. The researchers again elucidated the potential for computers to become an integral part of today’s and tomorrow’s schools.

**On-line Counseling and Distance Technologies**

Technology has become an equally salient component of practice for counselors and therapists using different kinds of internet technologies to conduct therapy, including E-mail (Sleek, 1997; Murphy & Mitchell, 1998), chat-rooms (Sampson et al., 1997), the World Wide Web (Maheu, 1997; Maheu & Gordon, 2002; Reimer-Reiss, 2000), and interactive video (Jerome & Zaylor, 2000). Behavioral eHealth is a specific term that captures the variety of psychological services being offered on-line, ranging from psycho-educational information to psychotherapy (Maheu & Gordon, 2002). Behavioral eHealth is an extension of the terminology telehealth- “the use of telecommunications and information technology to provide access to health assessment, diagnosis,
intervention, consultation, supervision, education and information across distance” (Nickelson, 1998, p.527). The numbers of counselors and psychologists on-line grow each day.

Distance technology is a term used for applying technology to provide geographically distant individuals proximity in communication (Reimer-Reiss, 2000). Distance technology can increase access to mental health resources beyond those traditionally available (Kreutzer et al., 1992). Distance technology has the potential to reach geographically remote individuals who may not be able to physically get mental health counseling (Sampson et al., 1997). Distance technologies include but are not limited to email, the telephone, the internet, internet-chat, videoconferencing, and on-line video-chat.

Email is an easy inexpensive mode for consumers to communicate with their counselors or to engage in group counseling sessions (Reimer-Reiss, 2000). Although not all individuals have email, research suggests the numbers of people with email continues to increase (Kane & Sands, 1998; Sampson et al., 1997). Email as a treatment modality for counselors is becoming more prominent, and several potentials have been identified (Murphy & Mitchell, 1998)-

1. A permanent record- the entire text of the therapy is available to both the client and the therapist. Re-reading the text can be beneficial to the client who can see how far they have come in therapy and can revisit sessions at anytime.

2. Typing as an external mechanism- this process can allow a client to develop some distance from their problem and to see their relationships and themselves as distinct from the problem itself. Externalization is a natural phenomenon to typing it out and reading it on paper.

3. Seeing ourselves in print- theoretically, when put in print, clients can go back and edit what they have written and think of themselves in a more critical nature. They may be likely to read and realize their own contradictions that would need to be addressed by the therapist in a traditional format.
4. Addressing power imbalances within the therapeutic system- email can reduce the inherent power hierarchy between the therapist and the client.

5. The feelings are now- A client can sit down and write their therapy email right when they are experiencing their feelings.

Email can be a great tool to utilize for therapy.

On-line therapy can also take on a group format. Descriptive studies of computer groups include interventions with caregivers of people with AIDS (Brennan, Moore, & Smyth, 1992), with survivors of sexual abuse (Finn, 1995), and with Alzheimer’s patients and their families (Smyth & Harris, 1993). Benefits include flexible meeting arrangements, supportive intimacy, increased accessibility, privacy for those who feel stigmatized, reduced salience of irrelevant differences due to race or status, and precise information exchange (Weinberg et al., 1995).

Dickerson (2001) suggests 5 ways to utilize the internet in current clinical practice, which include-

1. Client support- When clients have a particular mental health issue, websites can offer a wealth of suggestions about how to handle the problem, and can put them in touch with others with a similar issue. Examples of such sites include www.planet-therapy.com and www.mentalhelp.net.

2. Client information resources- the web is an extraordinary source of knowledge if clients are directed in appropriate directions.

3. E-mail between sessions- A therapist can provide support, and email can have disinhibiting effects were a client may feel more comfortable to share something they may not have shared face to face.

4. The virtual therapist helper- the therapist themselves can use the internet to gain information about the presenting problem of a client.

5. The virtual therapists office- Now available online are resources for the therapist to maintain records and scheduling such as www.helphorizons.com.
Conclusion

Emerging technology perpetually changes the environment of mental health care, continuously changing tools and options available to psychologists; it becomes imperative that new technological competencies be developed by counselors and incorporated into research and practice (Jerome & Zaylor, 2000). Just as millions of Americans are joining the connected world of the internet, many psychologists and counselors are realizing the benefits of utilizing technology in their practice in some way. Internet resources provide quick access to mental health information (Guterman & Kirk, 1999), and clients will begin to have some expectation of utilization of this resource in their therapy. Rapid advances in computers and technology represent one of the most profound changes facing counselors and psychologists today (Gore, Leuwerke, & Krumboltz, 2002).

Internet and On-line Research

The internet has the potential to completely redefine the way scholarly research is done (Harris & Dersch, 2000). The internet is accessible to many individuals and has the ability to accommodate several forms of communication into one medium (i.e. text, audio material, video material, and live interaction). Despite the internet’s enormous potential for research, drawbacks in data collection loom large. Nonetheless, internet-based scholarly research is building credibility (Watt, 1997; Michalak & Szabo, 1998; White, Carey & Dailey, 2001; Duffy, 2002). In fact, the internet itself is a research tool, as most individuals who access the internet are looking for a specific set of information, which is by definition research. As with any new medium, there are always red flags raised, and subsequent ways to accommodate for inherent problems.

Watt (1997) explores using the internet for quantitative survey research and postulates some benefits and ways of securing an appropriate sample. Benefits include-

1. Speed: A questionnaire can easily be created using software packages and placed on the web, it can be distributed to large numbers of people at just a click, and respondents can easily return the survey. The survey results can then be
automatically recovered in a spreadsheet format and placed into a statistical package for easy analysis. Mailing delays and time spent are greatly reduced.

2. Cost: Studies with large numbers of respondents can be done at substantial savings to the researcher. Mailing cost in a standard survey can be high, and the internet minimizes that cost.

3. Ease of modification: If the first few respondents are having difficulties responding to the questionnaire, then the instrument could be quickly modified. The early data returns could be considered a pilot from within the sample itself.

4. Multi-media web instrumentation: All media formats lend for greater variety in instrumentation. For example, survey instruments can be made visually pleasing with graphics, instructions can be given via audio, and video can be played.

Watt (1997) continues to explain that not all populations are appropriate for internet research, but says that professionals are an excellent population to utilize since higher levels of professionals utilize information technology on a daily basis. Professionals will likely have familiarity and experience with the internet, making them more likely to respond to a survey instrument on this media. The recruited sample is excellent for gaining a sample from a particular group of professionals by requesting individuals from that group to participate in the study (1997). For example, members of a professional organization can be invited to participate in a study and the sample characteristics and demographics can then be compared to the population’s characteristics for similarities. This will help to ensure that respondents to an internet survey are members of your target sample by requiring a pin number to access the survey (1997).

Methodological issues surface in web-based research that may not be an issue for traditional forms of research (Duffy, 2002), but ways of overcoming the problems are present. First, the nature of the sample is different from a traditional mailing. For example, respondents in web-based research may make concerted efforts to participate in such studies for purely intellectual stimulation and because they are interested in internet phenomena (Buchanan and Smith, 1999); they may have different reasons for participating in an internet survey than do those who respond to a mailing. No research
has been done on demographic characteristics that illustrate non-similarities from the two differing kinds of samples, but writing up the final data should mention this inherent limitation. Second, environmental factors are present. For example, anonymity can be an issue, where someone could make up false information about themselves to skew data. A phenomenon where people take on new identities over the internet is not uncommon (Smith & Leigh, 1997). Although this can be an issue on the internet, it is also a problem for any kind of survey. Construction of the survey should contain a few checks and balances to minimize this occurrence. Another environmental challenge is the vast differences in computer technologies between individuals, including browser differences and Mac versus PC issues (Buchanan & Smith, 1999). This is overcome by utilizing software, such as survey maker, that take these differences into account. Third, privacy and confidentiality are an issue. Increasing numbers of people can access data stored on the internet. This is simply overcome by compiling data every 3 days off of the internet server to a hard drive. Finally, security can be a risk (Duffy, 2002). Email and connections to the internet can lead to getting a virus on your own computer, and people are leery about this. Protecting people by not adding attachments and having a pin number to access the website can lower this risk.

The past would suggest that tight control of an experiment is the only valid and reliable method of arriving at scientific knowledge (Campbell & Stanley, 1966). However, the social sciences have moved away from this quasi-experimental approach toward more qualitative, ethnographic, and less rigidly structured projects to answer social questions (Burman, 1996). Since the internet represents an important new communication modality, future research utilizing this modality must be conducted. Although tight experimental controls not as easily achieved on the internet can delimit the traditional quasi-experimental approach, exploratory research can answer important questions about social science, and the internet is a good way to accomplish this task.
Chapter 3- Methodology

The purpose of this exploratory dissertation was to gather data regarding
information technology, namely the use of the internet, as it related to clinical counselors.
The findings had the potential to add to the sparse information base regarding use of
technology in clinical counseling. The data for this dissertation was collected by
utilization of an on-line survey of a national sample of 534 clinical counselors. The
questionnaire was designed to assess a) the extent to which counselors are knowledgeable
of computer technologies, b) the extent to which their clients make use of the internet,
and c) the extent to which they believe computer technology contributes to their
professional practice. The survey instrument, data collection and sampling procedures
were described in detail below.

Participant Recruitment

The recruited participants included clinical counselors who have volunteered to
participate in this study after an on-line solicitation designed to enlist clinical counselors
who see on average at least five clients face-to-face per week. The volunteers were
obtained by utilizing several state divisions of a national organization, the American
Mental Health Counselors Association (AMHCA); these volunteers were recruited with
the help of the state presidents of each participating state’s clinical counseling
organization. A brief description of the study along with a link to the survey instrument
was sent to fifty clinical state counseling organization’s presidents and executive
directors (these invitations are located in appendix A). They were invited to look through
the survey instrument, complete the instrument, and then decide if they would send out an
invitation to members of their organization to participate in the survey. A short follow-
up email was then sent to the aforementioned state presidents asking if they had the
opportunity to read through the instrument and that they could email me with any
questions regarding the study. From this initial mailing, 12 state presidents agreed to send
an invitation to members of their organizations to participate, but 5 of these later said
they would not participate. From these invitations came 534 volunteers who agreed to
receive the survey instrument, under the guise that they were not obligated to complete
the instrument. This process of recruiting persons took several months and potential participants were added to a listserv created for the dissertation instrument mailing. Individuals were allowed to volunteer to participate up until the day prior to closing of data collection from the on-line instrument.

A subsequent invitation to participate in the study was sent to the recruited list of 534 potential survey respondents with an invitation to complete the web-based survey. Within this invitation was a link to the survey instrument, an incentive to complete the survey that allowed the respondents to receive a list of on-line resources ascertained from the study to help with their individual practice, and a thank you for having initially volunteered to be a part of the study. Three weeks was given to respond.

For confidentiality concerns, the state organizations would not provide a list of email addresses from which a random sample could be obtained. When an email was sent to all of the presidents of the individual state organizations, as gotten off of the AMHCA’s website, the state division presidents of Vermont, Texas, Missouri, North Carolina, Georgia, Connecticut and Virginia replied volunteering to help with my request to send an email to members of their state organizations to solicit volunteers.

Recruiting people to form a sample is a process that allows for more control over the make-up of a sample in an internet based research project (Watt, 1997). Simply put, my target sample included clinical counselors who see at least 5 clients per week. The invitation to participate in the study, sent to potential volunteers by the state presidents, provided this guideline as a requirement to volunteer for the study. Not visible in the recruiting process, but an inherent characteristic of the sample, is that the sample consisted entirely of internet connected individuals.

Another benefit to recruiting people for a sample is enabling the ability to monitor who responds to your survey (Watt, 1997). When a survey is done over the internet, anyone who gains access to the website can respond to the survey, whether they were intentionally sent to the website by the researcher or whether they found it on their own
with a search engine. By recruiting persons for the sample and having given those individuals the specific web address number to access the website, one can be relatively sure only the recruited individuals were responding to the survey instrument.

This study was designed to be exploratory in nature and overall generalizations were not made. Because of this approach, a random sample was not necessary. However, by comparing the sample demographics to demographic characteristics of other studies and to estimates of national statistics for counseling organizations, one can ascertain whether the recruited sample was characteristically similar to the overall population being focused upon, namely clinical counselors belonging to state associations of the AMHCA. This is a process becoming more accepted with on-line survey based research where a random sample is not attainable (Duffy, 2002).

**Instrument**

In an attempt to devise what kind of information would be relevant to creating an instrument specific to different kinds of ways the internet comes up in face to face sessions with clients, a pilot questionnaire was sent out to 10 clinical counselors within the state of Virginia. Five open ended questions were asked to simulate brainstorming of this topic (the pilot instrument is in appendix B). From this pilot instrument, and from several meetings with committee members, several topic areas were targeted and included in the final survey instrument.

The final survey instrument was divided into six sections- 1) the counselors’ use and discussion of the internet with their clients; 2) the counselors’ perceptions of clients and their use of the internet; 3) the counselors’ perceptions of the impact of the internet to the counseling profession as a whole; 4) the counselors’ self reported internet competence; 5) all that apply to you and your practice questions targeting client topics of internet discussion and targeting counselors’ specific uses of the internet; and 6) demographics. Within each section were scales created to measure different constructs related to the research questions below. Each scale was described in relation to the research question that scale was intended to answer. The survey instrument is in
Appendix C and referrals to specific items that create a given scale will be made using this instrument.

Dillman (2000) outlined how to create and implement an internet based survey using a variation of the tailored design method, and the instrument and plan of implementation for this dissertation followed these guidelines. The survey instrument was a simple questionnaire using a Likert scale for answer responses. The response scales used in the survey instrument were seven point Likert scales with labels only for the lowermost and uppermost categories. For example, rating oneself on a scale from 1 to 7 where 1=low and 7= high. The Likert response scales were designed with simplicity in mind. Dillman emphasizes, “Simplicity is also achieved by stripping scales of labels and asking people to place themselves on a one to seven scale.” (p. 45). Using a seven point scale throughout the survey instrument also provided consistency. Only the demographic questions and multiple response questions varied from this design.

As suggested by Dillman (2000), wording of questions for simplicity and reducing specialized words were also done for this survey instrument. Sentence structure was maintained throughout the survey instrument using as few words as possible to pose each question. Five colleagues read through the instrument to ensure understanding of the questions posed to help ensure comprehension of each question by the potential respondents.

Dillman (2000) also suggested that the most important questions on the survey instrument employ some sort of cognitive recall, a technique to help slow down the response time by asking similar questions to those already posed. This helps to ensure accuracy regarding a question since the respondent will slow down to recall what they may have answered to a similar question. This technique was minimally utilized to maintain brevity.

Putting the survey online to a website was done using a program called survey maker, available through Virginia Tech. Although many things could be done to enhance
the aesthetic presentation of the instrument, it was important to maintain simplicity. This survey instrument utilized a simple click to fill the bubble pattern for each item on the instrument. No coloring of the questions was done to eliminate figure-ground difficulties. Responding to the survey instrument simply required clicking on the link to the website, clicking on each bubble to respond to each question or clicking on a field to type in a short answer response. Lastly, there was a “submit” button to click when the questionnaire was completed. After clicking the submit button, respondents were thanked for participating and were invited to send their email addresses to be added to a list to receive on-line resources compiled from the study. Fortunately, the survey maker program was designed to work with minimal computer requirements and would work with any web browser; therefore anyone with access to the internet, regardless of equipment, could access and complete the survey. Only one respondent reported difficulty accessing the instrument, and when they tried a second time, had no problem accessing it.

**Research Questions**

1. What are the current self-reported technological and internet competencies of clinicians in practice, and to what extent do counselors use the internet in their practice?

To answer this question three scales were computed that placed counselors on a continuum in terms of high and low discussion of the internet in sessions, in terms of high and low competence of the internet, and in terms of overall internet use in their practice. The counselor competence scale was computed using items 23, 24, 25 and 29. The counselor in session discussion scale was computed using items 26 and 27. The counselor overall internet use scale was computed using items 26, 27, and 28.

Secondly, a multiple choice question with multiple answers was added to the instrument where counselors could choose as many responses as were relevant to their clinical practice. The multiple answer responses were developed from the pilot questionnaire and brainstorming sessions with committee members. These answers were
reported in simple percentages of the total respondents (i.e. 85% of responding clinical counselors use the internet for researching mental health concerns).

2. What demographic variables are associated with the utilization of the internet in clinical practice?

In responding to this question, the in session discussion scale and the overall internet use scale were compared to demographic variables through an analysis of variance to determine if any statistical differences existed related to demographic variables and these scales (i.e. Do people from urban areas use the internet in practice differently than rural individuals?).

3. What are counselor’s perceptions of their client’s knowledge and use of the internet, as it relates to the client’s own mental health and treatment?

This question was answered by creating two scales related to the counselors’ perceptions of their clients. The first scale focused on perceptions of clients’ in session discussions of internet use and was computed with items 2, 3, 4, 5, 6, 7, 8, 9, and 10 of the instrument. The second scale focused on perceptions of internet use by clients and was computed using items 11, 12, 13, 14, 15, and 16 of the survey instrument.

Secondly, a multiple response question was developed asking what topics clients discuss related to the internet in the counseling session. Like the previous multiple response question, this question was developed using the pilot instrument responses.

4. How might perceptions of a client’s utilization of the internet be related to that counselor’s own knowledge and use of the internet?

The aforementioned scales computed to answer question three were compared to the counselor internet competence scale and the counselor usage scale created for question one to respond to this question.
5. How do counselors perceive the impact of the internet on clients in general or to the counseling profession as a whole?

An impact of the internet on clients in general scale was computed using items 17, 18, 19, and 20 and this scale was used to respond to this question.

**Data Collection**

The process of collecting data followed a sequential process outlined below, which followed a variation of the tailored design method (Dillman, 2000).

1. A request was made to the serving presidents of individual state divisions of the American Mental Health Counselors Association (AHMCA) to support the research project and solicit volunteers to send emails to the researcher to create a list of candidates to participate in the study. The list of volunteers then became the sampling frame and the email addresses were placed in the equivalent of a list serve format. This allowed for an email to be sent to each participant without showing the emails of the other participants. This process is called sending a blind email (Watt, 1997). The participants could only reply to the sender and not to the entire list. This minimized the chance one could accidentally respond to the entire list (for example, a person with a simple question would not pose that question to the entire list if they hit reply to their email message).

2. The first email sent to those recruited provided a brief description of the study with an invitation to complete the survey by clicking the provided link, since the original solicitation by the serving state presidents was only to get potential candidates. The respondent simply clicked the link and subsequently accessed the survey instrument. The survey instrument was the one created using survey maker, a software program provided by Virginia Tech. The survey instrument simply required filling in bubbles by “pointing and clicking” with the mouse. The software required only minimal computer requirements and was compatible with
all formats and web browsers. When the survey was completed, the respondents pressed a “submit” button and the data was automatically put into a text file spreadsheet that could be imported into Excel and transferred to SPSS after cleaning up the data (i.e. making each variable compatible to the SPSS format, such as replacing numbers for text responses).

3. To ensure the data was not accessed by an unauthorized user, the data file spreadsheet was password protected and moved to a compiled different PDF file every 5 days. The compiled file built the final data set to which analysis was done.

4. A second email was sent out to the recruited sample. Within this communication was a thank you note for those who had completed the survey and a request for those who hadn’t had the opportunity to complete the survey to do so. This was done to bolster response rates. Unfortunately, there was no way to know who had completed the survey by email address, so the combined letter was necessary.

5. A set of data was compiled by joining respondents from each mailing. The data was imported into Excel, where a process called sifting was done (Watt, 1997). Essentially, anyone who responded to the questionnaire and did not meet the requirements was excluded. The requirements were that the person currently sees at least 5 clients on average per week. Since the recruited individuals were aware of the requirements, only a few respondents had to be eliminated for not meeting the criteria.

6. The final “cleaned up” data set was imported from Excel into SPSS for data analysis. Cleaning up the data included such activities as replacing text responses to number responses (i.e. male and female to 1 and 2), replacing instrument questions with eight letter variable headings, and searching out missing data to determine if the respondent could still be included in the final analysis (for
example, one respondent only answered five questions and was eliminated from the final data set).

**Data Analysis**

Once the data collection procedures were completed and the data had been imported into SPSS, data analysis took place following these steps.

1. Recoding of any negative items was done. This meant the scale numbers for negative items were inverted so they could be compared to the other items on the survey instrument.

2. Simple descriptive statistics and frequencies were run to categorically summarize the findings of each item and to look for outliers and missing data.

3. Comparisons of the demographics of the entire sample were made to national demographic data available for ACA members and to other published studies. This supported the argument that this sample was demographically similar to a national population.

4. Analysis of variance procedures were done to compare scales based on different demographic variables.

5. Factor analysis and reliability analysis using Cronbach’s alpha were used to evaluate the scales.

**Summary**

Outlined above is the methodological plan for this study. Being a purely exploratory study, a recruited sample was used. A variation of the tailored design method was used for this study so it could be conducted over the internet. Procedures were in place to maximize response rates by maintaining simplicity. The results provided
potentially important information regarding clinical counselors and the impact of the internet upon their practice.
Chapter 4- Results

The following chapter presents the results of this project. Data gathered from the on-line survey instrument given to clinical counselors from around the country was compiled to demonstrate the impact of the internet on the counseling profession both in individual practice and as a whole. The survey instrument and overall study targeted counselors’ perceptions of their clients in relation to internet use, as well as counselors’ own internet use as it relates to their practice. The research questions were answered with supporting data summarized into tables and graphs.

Demographic Data

An invitation to participate in a study, involving the impact of the internet on clients and clinical practice in general, was sent to various members of state clinical counseling organizations across the country. First, a letter was sent explaining the nature of the study and containing a sample of the survey instrument to the state presidents and executive directors of each of fifty state counseling organizations. In that letter was a request that the invitation to participate in the survey be sent and forwarded to their members. Initial responses indicated that twelve states were willing to send the request to their members. Subsequently, seven state organizations participated, including Vermont, Texas, Missouri, North Carolina, Georgia, Connecticut and Virginia and several individuals from other states were recruited based on their previous memberships with the aforementioned seven states. A list of 534 counselors responded displaying interest in potentially being a part of the survey.

After the recruitment of the participants, the instrument was sent to the 534 potential participants and 246 people responded. A period of two months passed between when the final recruited list of potential respondents was completed and the instrument was sent out to this list. Due to time passing, technical difficulties or instrument completion difficulties some of the potential respondents did not complete the instrument. Of the 246 responses, 215 were used in the final data analysis; 31 responses were eliminated for missing data or not meeting the criteria for the study, which was that counselors see at
least five clients per week. The resulting response rate with the potential respondent group was 46%, but it was unclear what the overall recruitment rate was, an inherent limitation to the on-line recruitment of participants. Based on rough estimates of data given by the state presidents estimating the numbers of emails on their membership lists, the recruitment email went to approximately 5100 clinical counselors, giving a recruitment estimate at around 10% for the potential respondent list. Overall, the request to participate went to approximately 5100 individuals, 534 responded as potential participants and were recruited as the sampling frame, and 215 final participants were used in the data analysis. Roughly 5% of all the people who received the initial email communication to participate in the study ended up in the final data analysis. Numbers between 5 and 15% are typical recruitment projections for studies using the internet for dissemination of their survey instrument (Duffy, 2002; Watt, 1997).

Section 6 of the survey instrument was designed to gather demographic characteristics of the sample. The first item on the survey instrument categorically fits under demographics as well and was used to sift the sample to the targeted demographic of clinical counselors who see at least five clients per week on average. The categorical demographic data of the sample is described in the following table with frequencies reported and percentages reported in parentheses. For the ethnicity category, participants were categorized into Caucasian and other for numbers to be high enough for statistical analysis, and the other category is subsequently recategorized in the table as a way to illustrate the actual breakdown of ethnicity in the sample. This breakdown was necessary due to the low responses from minorities in this project.
Table 4.1 - Sample demographics with reported frequencies and percentages

<table>
<thead>
<tr>
<th>Licensure Status</th>
<th>Licensed Professional Counselor</th>
<th>License Eligible</th>
<th>Nationally Certified Counselor</th>
<th>Not Licensed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>159 (74%)</td>
<td>26 (12.1%)</td>
<td>22 (10.2%)</td>
<td>8 (3.7%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position</th>
<th>Community</th>
<th>Private Practice</th>
<th>School</th>
<th>Student</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40 (18.6%)</td>
<td>86 (40%)</td>
<td>23 (10.7%)</td>
<td>7 (3.3%)</td>
<td>59 (27.4%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Workplace Setting</th>
<th>Urban</th>
<th>Suburban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>83 (38.6%)</td>
<td>82 (38.1%)</td>
<td>50 (23.3%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>61 (28.4%)</td>
<td>154 (71.6%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Caucasian</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>196 (91.2%)</td>
<td>19 (8.8%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>African American</th>
<th>Asian</th>
<th>Hispanic</th>
<th>Native American</th>
<th>Ethnicity not listed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11 (5.1%)</td>
<td>2 (.9%)</td>
<td>1 (.5%)</td>
<td>2 (.9%)</td>
<td>3 (1.4%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Highest Education Level</th>
<th>Bachelors</th>
<th>Masters</th>
<th>Doctoral</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 (1.4%)</td>
<td>158 (73.5%)</td>
<td>54 (25.1%)</td>
</tr>
</tbody>
</table>
Table 4.1 (continued) - Sample demographics with reported frequencies and percentages

<table>
<thead>
<tr>
<th>Member of State Clinical Counseling Organization</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>182 (84.7%)</td>
<td>33 (15.3%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age of Clientele</th>
<th>Children and Adolescents Ages 1-17</th>
<th>Young Adults Ages 18-26</th>
<th>Adults Ages 26-64</th>
<th>Seniors Ages 65+</th>
<th>Clients of all ages All Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>53 (24.7%)</td>
<td>22 (10.2%)</td>
<td>93 (43.3)</td>
<td>4 (1.9%)</td>
<td>43 (20.0)</td>
</tr>
</tbody>
</table>

The following demographic variables were continuous variables and were reported with histograms in Graphs 4.1, 4.2, and 4.3.

Graph 4.1- Histogram of clients seen per week

**Average face to face clients in a week**

![Histogram of clients seen per week](image)

- Std. Dev = 10.45
- Mean = 16.9
- N = 215.00
Graph 4.2- Histogram of years of experience

Years of experience

Graph 4.3- Histogram of age

Age
Results for Research Questions

To gain access to the concerns related to information technology and the internet in counseling, several research questions were addressed. In so doing, scales were developed to answer the questions. Each scale was computed using the responses from individual items on the survey instrument. A score for each scale was computed, thus giving a one to seven point scale. Individual item frequencies can be seen in the histograms in Appendix D, and the means and standard deviations are summarized in Table 4.2 on the following page-

1. What are the current self-reported technological and internet competencies of clinicians in practice, and to what extent do counselors use the internet in their practice?

To answer this question three scales were computed- 1) Counselors’ responses placed them on a continuum in terms of discussion of the internet in sessions on a seven point Likert scale where 1-low and 7-high, 2) Counselors’ self-reported internet competence was evaluated on the same Likert seven point scale with 1-low and 7-high, and 3) Counselors’ overall internet use in their practice was evaluated on the same seven point Likert response scale. These scales were computed by taking the sums of the instrument items that pertained to each scale and dividing them by the number of items for that scale, so counselors’ placement on the scales follows the same seven point Likert demarcations. Cronbach’s alpha for the three scales were .82, .87, and .80, respectively. A factor analysis was done to evaluate the scale formations by seeing if individual instrument items loaded to the targeted construct, and the component extraction showed that the scales were appropriate, as evidenced by the alpha scores. Histograms of the scales are shown on the page following table 4.2 and represent the seven point Likert response scales denoted above.
Table 4.2- Scales with respective scale items indented below

<table>
<thead>
<tr>
<th>Scales and Scale Items</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselors’ Discussion of the Internet in Sessions</td>
<td>2.70</td>
<td>1.41</td>
<td>.83</td>
</tr>
<tr>
<td>Frequency of discussing the internet in sessions</td>
<td>2.70</td>
<td>1.43</td>
<td></td>
</tr>
<tr>
<td>Discussing internet resources for homework</td>
<td>2.70</td>
<td>1.70</td>
<td></td>
</tr>
<tr>
<td>Counselors’ Internet/Technology Competence</td>
<td>5.46</td>
<td>1.08</td>
<td>.88</td>
</tr>
<tr>
<td>Knowledge of the internet</td>
<td>5.70</td>
<td>1.27</td>
<td></td>
</tr>
<tr>
<td>Knowledge of websites related to mental health</td>
<td>5.10</td>
<td>1.29</td>
<td></td>
</tr>
<tr>
<td>Knowledge of computers in general</td>
<td>5.21</td>
<td>1.32</td>
<td></td>
</tr>
<tr>
<td>Overall comfort level with the internet</td>
<td>5.92</td>
<td>1.16</td>
<td></td>
</tr>
<tr>
<td>Counselors’ Overall Internet Use in Practice</td>
<td>3.40</td>
<td>1.31</td>
<td>.81</td>
</tr>
<tr>
<td>Use of the internet to assign homework</td>
<td>2.70</td>
<td>1.70</td>
<td></td>
</tr>
<tr>
<td>Use of the internet to research mental health</td>
<td>4.60</td>
<td>1.78</td>
<td></td>
</tr>
<tr>
<td>Discussing the internet in sessions</td>
<td>2.70</td>
<td>1.43</td>
<td></td>
</tr>
<tr>
<td>Perceptions of Clients in Session Discussion of Internet Use.</td>
<td>2.33</td>
<td>.98</td>
<td>.89</td>
</tr>
<tr>
<td>Clients discuss home computer use</td>
<td>2.70</td>
<td>1.59</td>
<td></td>
</tr>
<tr>
<td>Clients discuss the internet</td>
<td>2.70</td>
<td>1.58</td>
<td></td>
</tr>
<tr>
<td>Clients discuss utilization of on-line support groups</td>
<td>1.5</td>
<td>.87</td>
<td></td>
</tr>
<tr>
<td>Clients discuss websites related to presenting concern</td>
<td>2.43</td>
<td>1.36</td>
<td></td>
</tr>
<tr>
<td>Clients discuss on-line relationships</td>
<td>2.00</td>
<td>1.18</td>
<td></td>
</tr>
<tr>
<td>Clients discuss the internet as a source of stress</td>
<td>1.83</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>Clients discuss their uses of the internet for leisure activities</td>
<td>2.48</td>
<td>1.46</td>
<td></td>
</tr>
<tr>
<td>Clients discuss internet addictions</td>
<td>1.77</td>
<td>1.05</td>
<td></td>
</tr>
<tr>
<td>Clients discuss the internet as a communication tool</td>
<td>3.42</td>
<td>1.75</td>
<td></td>
</tr>
<tr>
<td>Perceptions of Internet use by Clients</td>
<td>2.00</td>
<td>.91</td>
<td>.81</td>
</tr>
<tr>
<td>Clients utilize the internet to research diagnoses</td>
<td>2.39</td>
<td>1.34</td>
<td></td>
</tr>
<tr>
<td>Clients use the internet to research medications</td>
<td>2.41</td>
<td>1.32</td>
<td></td>
</tr>
<tr>
<td>Clients use internet material to question treatment approaches</td>
<td>1.72</td>
<td>.95</td>
<td></td>
</tr>
<tr>
<td>Clients use email to notify of appointment changes</td>
<td>1.93</td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td>Clients email of progress between sessions</td>
<td>1.64</td>
<td>1.06</td>
<td></td>
</tr>
<tr>
<td>Impact of the Internet on Clients in General or to the Profession as a Whole</td>
<td>4.25</td>
<td>1.32</td>
<td>.82</td>
</tr>
<tr>
<td>The internet is a good resource tool to use with clients</td>
<td>4.40</td>
<td>1.63</td>
<td></td>
</tr>
<tr>
<td>Process of counseling is improved by using the internet</td>
<td>3.63</td>
<td>1.73</td>
<td></td>
</tr>
<tr>
<td>Websites provide reliable information regarding mental health</td>
<td>4.08</td>
<td>1.50</td>
<td></td>
</tr>
<tr>
<td>On-line material is more useful when explored in counseling sessions</td>
<td>5.04</td>
<td>2.18</td>
<td></td>
</tr>
<tr>
<td>The internet is a good resource tool for counselors</td>
<td>5.71</td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td>The internet is a good resource tool for clients</td>
<td>4.82</td>
<td>1.54</td>
<td></td>
</tr>
</tbody>
</table>
Graph 4.4- Histogram of counselors’ internet competence (self-reported)

Counselors' internet competence scale

Counselors' overall internet use

Graph 4.5- Histogram of counselors’ overall use of the internet in their practice
Graph 4.6- Histogram of counselors’ discussion of the internet in sessions with clients

The aforementioned scales shown in the previous three histograms demonstrate a disparity between a counselor’s internet competence and their overall internet use in their practice or their discussion of the internet with clients in sessions. Using correlation analyses involving linear plots and cross-tabulations, the scales demonstrate a linear relationship between one another. Counselors who are on the upper part of the continuum in terms of internet competence do use and discuss the internet in their sessions more frequently than counselors at the lower end of the internet competence continuum, however even highly competent counselors in regards to the internet have low in session discussions and low overall internet use. For example, a counselor who places highly on the continuum in terms of internet competence will place towards the higher numbers on the internet discussion in session and overall internet use scales, but the upper numbers of those two scales are much lower than the internet competence scale. Simply put, high internet competence does not equate with high internet discussion or high internet use, despite the positive correlations. Internet discussion in sessions and overall counselor internet use are highly correlated, almost reaching 1.00 (a perfect correlation). The
following correlation matrix in Table 4.3 shows the significant correlations between the scales.

Table 4.3- Correlations of Scales

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Counselors' competence scale</th>
<th>Counselors' in session discussion scale</th>
<th>Counselors' overall internet use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselors' competence scale</td>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>.318*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>215</td>
<td>215</td>
</tr>
<tr>
<td>Counselors' in session discussion scale</td>
<td>Pearson Correlation</td>
<td>.318*</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>215</td>
<td>215</td>
</tr>
<tr>
<td>Counselors' overall internet use</td>
<td>Pearson Correlation</td>
<td>.437*</td>
<td>.911*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>215</td>
<td>215</td>
</tr>
</tbody>
</table>

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

In addition to creating the aforementioned 3 scales to determine the extent to which counselors use and discuss the internet in their practice, multiple response questions were asked to the participants to discover what topics related to the internet have been brought up by clients in their sessions and how counselors utilize the internet in their practice. The following tables summarize those findings.
Table 4.4- Counselors’ use of the internet in relation to their clinical practice

<table>
<thead>
<tr>
<th>Topic</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researching Mental Health Concerns</td>
<td>185</td>
<td>85%</td>
</tr>
<tr>
<td>Professional Associations</td>
<td>182</td>
<td>83%</td>
</tr>
<tr>
<td>Professional Correspondence</td>
<td>163</td>
<td>75%</td>
</tr>
<tr>
<td>Staying up to date on current research</td>
<td>126</td>
<td>58%</td>
</tr>
<tr>
<td>Researching Medications</td>
<td>122</td>
<td>56%</td>
</tr>
<tr>
<td>Finding Community Resources</td>
<td>120</td>
<td>55%</td>
</tr>
<tr>
<td>Informational Listservs</td>
<td>113</td>
<td>52%</td>
</tr>
<tr>
<td>Scheduling Using Email</td>
<td>77</td>
<td>35%</td>
</tr>
<tr>
<td>Filling out forms or paperwork</td>
<td>67</td>
<td>31%</td>
</tr>
<tr>
<td>Ideas for Homework</td>
<td>60</td>
<td>28%</td>
</tr>
<tr>
<td>Connect with managed care</td>
<td>56</td>
<td>26%</td>
</tr>
<tr>
<td>Referrals</td>
<td>54</td>
<td>25%</td>
</tr>
<tr>
<td>Topics</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>E-mail</td>
<td>173</td>
<td>79%</td>
</tr>
<tr>
<td>Chat Rooms</td>
<td>131</td>
<td>60%</td>
</tr>
<tr>
<td>Internet Relationships</td>
<td>124</td>
<td>57%</td>
</tr>
<tr>
<td>Research of Presenting Concern</td>
<td>121</td>
<td>56%</td>
</tr>
<tr>
<td>Internet Pornography</td>
<td>117</td>
<td>54%</td>
</tr>
<tr>
<td>Instant Messaging</td>
<td>101</td>
<td>46%</td>
</tr>
<tr>
<td>Family Time Related to Computer Use</td>
<td>91</td>
<td>42%</td>
</tr>
<tr>
<td>Buying and Selling Items</td>
<td>85</td>
<td>39%</td>
</tr>
<tr>
<td>Internet Addiction</td>
<td>84</td>
<td>39%</td>
</tr>
<tr>
<td>Internet Infidelity</td>
<td>73</td>
<td>33%</td>
</tr>
<tr>
<td>Career Development</td>
<td>73</td>
<td>33%</td>
</tr>
<tr>
<td>Medical Procedures</td>
<td>59</td>
<td>27%</td>
</tr>
<tr>
<td>Medications on-line</td>
<td>55</td>
<td>25%</td>
</tr>
<tr>
<td>Internet Safety</td>
<td>48</td>
<td>22%</td>
</tr>
<tr>
<td>On-line Support Groups</td>
<td>48</td>
<td>22%</td>
</tr>
<tr>
<td>Gambling or Gaming Sites</td>
<td>27</td>
<td>12%</td>
</tr>
<tr>
<td>Financial Concerns</td>
<td>23</td>
<td>11%</td>
</tr>
</tbody>
</table>
2. What demographic variables are associated with the utilization of the internet in clinical practice?

In responding to this question, the counselors’ overall internet use in their practice scale, the counselors’ discussions of the internet in sessions scale and the counselors’ internet competence scale were compared to demographic variables through an analysis of variance to determine if any statistical differences exist related to demographic variables and these scales (i.e. Do people from urban areas use the internet in practice differently than rural individuals?). The means used to compute the ANOVAs and $t$-tests are listed in the following tables with the significance levels of the computations. Corresponding complete ANOVA tables are listed in Appendix E.

Table 4.6- Means, standard deviations and a $t$-test of scales based on gender

<table>
<thead>
<tr>
<th>Scale</th>
<th>Males</th>
<th>Females</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselor Internet Competence</td>
<td>M= 5.47 SD= 1.03</td>
<td>M= 5.45 SD= 1.10</td>
<td>.962</td>
</tr>
<tr>
<td>Counselor Overall Internet Use in their Practice</td>
<td>M= 3.45 SD= 1.09</td>
<td>M= 3.10 SD= 1.37</td>
<td>.072</td>
</tr>
<tr>
<td>Counselor Discussions of the Internet in Sessions</td>
<td>M= 2.81 SD=1.10</td>
<td>M=2.45 SD= 1.50</td>
<td>.084</td>
</tr>
</tbody>
</table>

M= mean, SD= standard Deviation, and p=probability (significance at p<.05)

Differences between genders in terms of internet competence are almost non-existent, however differences in overall internet use in practice and overall internet discussion in sessions are present, approaching significance at the .05 level. There was a difference between genders that was worthy of noting despite the non- significant p values.
A $t$-test was also used to compare the race/ethnicity category. This comparison was done by grouping all non-Caucasian responses into an other category that represents minorities in general and comparing that grouping to Caucasians. The reasoning for this minority grouping was simply because response rates for individual minority categories were so low that any kind of statistical analysis would be irrelevant. Even with the minorities grouped into one category, the numbers are low and this analysis is purely for reporting purposes and likely has no statistical relevance.

Table 4.7- Means, standard deviations and a $t$-test of scales based on race

<table>
<thead>
<tr>
<th>Scale</th>
<th>Caucasian</th>
<th>Other</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>N= 196</td>
<td></td>
<td>N= 19</td>
<td></td>
</tr>
<tr>
<td>Counselor Internet Competence</td>
<td>M= 5.42</td>
<td>M= 5.88</td>
<td>.075</td>
</tr>
<tr>
<td>SD= 1.09</td>
<td>SD= .87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counselor Overall Internet Use in their Practice</td>
<td>M= 3.31</td>
<td>M= 3.80</td>
<td>.117</td>
</tr>
<tr>
<td>SD= 1.29</td>
<td>SD= 1.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counselors’ Discussions of the Internet in Sessions</td>
<td>M= 2.67</td>
<td>M= 3.18</td>
<td>.127</td>
</tr>
<tr>
<td>SD= 1.37</td>
<td>SD= 1.73</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

M= mean, SD= standard Deviation, and p=probability (significance at p<.05)

Interestingly, the minorities in this sample report higher internet competence, higher overall internet use, and higher levels of internet discussions in sessions. These numbers approach significance at the p<.05 level. This analysis may be somewhat skewed by the low numbers of minorities in the sample, but this evaluation is noteworthy.
Table 4.8 – Correlation matrix investigating age in relation to the scales

<table>
<thead>
<tr>
<th>Age</th>
<th>Counselors’ competence scale</th>
<th>Counselors’ in session discussion scale</th>
<th>Counselors’ overall internet use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
</tr>
<tr>
<td>Age</td>
<td>-.254*</td>
<td>.000</td>
<td>215</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>-.171*</td>
<td>.012</td>
<td>215</td>
</tr>
<tr>
<td>N</td>
<td>.006</td>
<td>.006</td>
<td>215</td>
</tr>
</tbody>
</table>

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

In analyzing the above correlation matrix with age compared to the scales, there is a negative linear relationship. Simply put, as age of the counselor goes down, there is a significant increase in internet competence, in internet discussion in sessions, and in overall internet use in practice. This suggests that younger counselors are utilizing the internet in the counseling profession at higher rates. As seen in the next ANOVA analysis based on clientele age, counselors working with predominantly younger clientele are discussing the internet at statistically higher rates in their sessions, suggesting that younger clientele may have higher expectations of discussing the internet.
Table 4.9- Mean, standard deviation and ANOVA reports based on clientele age

<table>
<thead>
<tr>
<th>Scales</th>
<th>Majority of Clientele Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Children and Adolescents</td>
</tr>
<tr>
<td></td>
<td>Ages 1-18</td>
</tr>
<tr>
<td></td>
<td>N= 53</td>
</tr>
<tr>
<td>Counselor Internet Competence</td>
<td>M= 5.67</td>
</tr>
<tr>
<td></td>
<td>SD= 0.96</td>
</tr>
<tr>
<td></td>
<td>Young Adults</td>
</tr>
<tr>
<td></td>
<td>Ages 18-26</td>
</tr>
<tr>
<td></td>
<td>N= 22</td>
</tr>
<tr>
<td></td>
<td>M= 5.76</td>
</tr>
<tr>
<td></td>
<td>SD= 0.91</td>
</tr>
<tr>
<td></td>
<td>Adults</td>
</tr>
<tr>
<td></td>
<td>Ages 26-64</td>
</tr>
<tr>
<td></td>
<td>N= 93</td>
</tr>
<tr>
<td></td>
<td>M= 5.42</td>
</tr>
<tr>
<td></td>
<td>SD= 1.12</td>
</tr>
<tr>
<td></td>
<td>Seniors</td>
</tr>
<tr>
<td></td>
<td>Ages 65+</td>
</tr>
<tr>
<td></td>
<td>N=4</td>
</tr>
<tr>
<td></td>
<td>M= 5.50</td>
</tr>
<tr>
<td></td>
<td>SD= 0.61</td>
</tr>
<tr>
<td></td>
<td>p= .098</td>
</tr>
</tbody>
</table>

This table shows that counselors working with clientele that are young adults discuss the internet at the highest levels followed by counselors working with children and adolescents.

ANOVA computations were run on all other demographic variables, but no other significant analyses appeared. These computations can be accessed in Appendix E.

3. What are counselor’s perceptions of their client’s knowledge and use of the internet, as it relates to the client’s own mental health and treatment?

This question was answered by creating two scales related to the counselors’ perceptions of their clients. The 2 scales differ from the 3 scales in the first research
question in that they look at perceptions of clients versus estimations of actual use. The first scale focused on perceptions of clients’ in session discussions of internet use and was computed by summing the items listed for that scale in Table 4.3 and dividing by the total number of items for that scale. The Cronbach’s alpha for the items in this scale was .88. The second scale focused on perceptions of internet use by clients and was computed using the items listed in Table 4.3 under the respective scale. A factor analysis suggested dropping item 14 from this scale, so this was done. The subsequent Cronbach’s alpha for the items in this scale went from .7253 to .8018 after dropping item 14. The resulting scales are shown in the following histograms which display means and standard deviations. In looking at these graphs, counselors’ perceptions of their clients’ uses of the internet in regards to mental health and the discussions of the internet during sessions is low. Counselors do not see that the internet is a pervasive topic for their clients.

Graph 4.7- Perceptions of clients in session discussions of internet use

Perceptions of clients in session discussions
of internet use

[Graph showing frequency distribution with categories labeled 1.00 to 5.00, and numbers indicating frequency at each category. The graph displays the following statistics: Std. Dev = .98, Mean = 2.33, N = 215.00]
4. How might perceptions of a client’s utilization of the internet be related to that counselor’s own knowledge and use of the internet?

After plotting for linearity, the scales were compared using a correlation matrix demonstrating the linear relationship between the scales.
Table 4.10- Correlation matrix investigating perception scales with counselor scales

<table>
<thead>
<tr>
<th>Perceptions</th>
<th>Counselors’ competence scale</th>
<th>Counselors’ in session discussion scale</th>
<th>Counselors’ overall internet use</th>
</tr>
</thead>
<tbody>
<tr>
<td>of clients in session discussions of internet use</td>
<td>Pearson Correlation</td>
<td>.054</td>
<td>.460*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.430</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>215</td>
<td>215</td>
<td>215</td>
</tr>
<tr>
<td>Perceptions of internet use by clients</td>
<td>Pearson Correlation</td>
<td>.090</td>
<td>.414*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.190</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>215</td>
<td>215</td>
<td>215</td>
</tr>
</tbody>
</table>

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

As expected, the higher levels a counselor has in session discussions of the internet or utilizes the internet in their practice, the higher the perception that their clients are also utilizing the internet. Assuming clientele across the sample is characteristically similar regardless of who the counselor is, this relationship is important in that it shows that higher levels of use equate with higher perceived importance to clients. Perhaps the internet is equally important to clients of counselors in the lower use categories, but it goes unrecognized.

5. How do counselors perceive the impact of the internet on clients in general or to the counseling profession as a whole?

A perceived impact of the internet on clients in general scale was computed by summing the corresponding instrument items for this scale listed in Table 4.3 and dividing by the number of items, and this scale was used to respond to this question. A factor analysis determined the items to be appropriate for a scale and the Cronbach’s alpha for the items was .8150. In addition a correlation matrix shows the linear relationship between the scales.
Graph 4.9- Impact of the internet on clients in general

Impact of the internet on clients in general 
and to the profession

Table 4.11- Correlation matrix investigating impact in general scale with counselor scales

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Counselors’ competence scale</th>
<th>Counselors’ in session discussion scale</th>
<th>Counselors’ overall internet use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact of the internet on clients in general</td>
<td>Pearson Correlation</td>
<td>.175*</td>
<td>.463**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.010</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>215</td>
<td>215</td>
</tr>
</tbody>
</table>

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

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

The higher the internet competence scale the more a counselor will see that the internet has an impact on the profession as a whole (significant at the p<.05 level). In addition and even more conclusive, is that the higher the counselors’ in session discussion of the internet and the higher the overall internet use in their practice, the higher the counselor will rate the significance of the internet to the profession as a whole.
Results for Open-Ended Questions

Although no research questions were posed in the methodology regarding this area, three open ended questions were added to the dissertation instrument to mine for more information regarding the internet in clinical practice. The first open question was added to the list of choices regarding topics that clients bring up in sessions, giving respondents an opportunity to fill in other categories. Listed below are the results and some quotes from this question.

- Medical information, re: chronic illnesses
- Concentration/ Focus improvement
- Games
- Efficacy and existence of on-line real time therapy
- Insurance information regarding mental health treatment
- Background checks of physicians and counselors
- “My clients are sex offenders and are no longer allowed to use the internet”
- Internet dating/ Meeting people
- Job boards
- Sexual issues, sexual liaisons, sexual addictions
- “Addictive games that hinder relationships, in particular ‘Vision Quest’ I call it ‘Vision Crack’”
- IQ testing
- Humor

The next open ended question dealt with other topics that were not listed for which counselors themselves use the internet. Listed below are the results and some quotes from this question.

- “Clients find my name on national certification websites and contact me for an appointment”
- Sending initial homework assignments to clients before the first appointment
- Looking for professional training or workshop opportunities
- Purchasing books relevant to practice
- In between sessions to support clients/ Updates
- Email counseling
- “Download the DSM-IV and PDR and Epocrates (psychotropic med program) onto my Palm Pilot”
- Career development research/ Major research
- “My own developed website to which I refer current and potential clients”
- “My most common use of the internet with my work is to have clients ‘check-in’ or vent via email that they know I will read and perhaps respond to most days. Most of my clients who do this find that just communicating their thoughts, feelings and situations is therapeutic. Often I am able to help maintain unstable clients through email contact better than via phone contact. I also prefer it and find it less intrusive.”
- Collaboration with other professionals
- Practice website
- Forwarding self prepared handouts, models, or art therapy information
- Marketing
- “It is unethical to use the internet to communicate with any client according to the Maine licensing board.”
- Clients inform of topic areas before sessions

Lastly, participants were invited to add anything they wanted relevant to the topic. This researcher got a bunch of good lucks, but here are some other results and quotes.

- “The demographics of my current client base are primarily low SES, about 20% illiterate. These two factors reduce the applicability of the Net in clinical practice. For those who are computer literate, my clinical concern is (a) that they use caution about what they read/believe and (b) they avoid using the Net as a distraction from focusing on appropriate changes.” Similar responses to this were seen regarding clientele SES and access to the internet.
- “I am concerned about using the internet as it relates to HIPAA privacy regulations and I am considering having patients sign an informed consent before I use the internet as a means of communication with them.” Privacy was another common theme.
- “I feel that we as counselors are underutilizing the internet.”
- “The large jumble of MH information found on the internet can hamper therapeutic process. Clients go to the first site that pops up and expect that material to be god speak. True internet research takes effort and time and the majority of my clients do not understand this.” Concern about internet material was another common theme.
- “Internet pornography and internet relationships have been factors in one quarter of the couples or wives who have come in to do counseling related to marital difficulties.”
- “Growing problem with ‘internet addiction’”
- “Clients changing diagnoses based on the ‘internet said’ I'm this!!”
- “The use of the internet to replace clinical dynamics is not advisable. To supplement clinical efforts is O.K. Be careful.”

**Summary**

Chapter 4 contained the results of this dissertation as they related to the posed research questions. The graphs and tables are used to illustrate the statistical manipulations done to help answer the research questions. The results of this project as they relate to the counseling profession will be discussed in detail in the following chapter.
Chapter 5- Discussion and Recommendations

The following chapter will examine in detail the results presented in Chapter 4 summarizing this research project. Analysis of the results in comparison to other studies will be conducted. Following the discussion of the results, implications of this research will be made. Finally, recommendations for other researchers will be outlined.

Sample and Participant Recruitment Analysis

As Watt (1997) suggests, professionals are a good group to use the recruited sampling methodology because professionals often fit into the sampling framework of the study. For example, this project looked at counselors’ perceptions of their clients’ use of technology and the internet. Although sampling from the population of the clients would be more ideal, professionals are a better target demographic for recruitment (1997), and these professionals can provide very similar information. Since the project was exploratory without the intent of broad generalizations, this procedure worked well within the scope of the on-line dissemination of the instrument.

Within this project, the survey instrument was sent on-line, so it was important the professionals being studied had access to the instrument modality, namely internet access. Although published statistics are not readily available about how and if counselors utilize the internet, the American Counseling Association estimates that over 90% of their members have an email address (2003). Again, how these email addresses are used and in what settings counselors have these addresses are unclear (i.e. some counselors may only have an email address that they can access at work and this access may be limited, etc). Nevertheless, taking the profession as a whole, one may deduce that email correspondence is a relatively effective modality to reach individuals in this profession.

The internet is a relatively new approach being used for quantitative research which posed interesting dilemmas in this research project. Speaking only from experience in this project, email addresses were guarded with more vigor than home
addresses. Organizations that would readily help with a traditional mailing list were more concerned about giving out email addresses for internet based research. One possibility for this is that communication via the internet leaves a physical record which can be archived and accessed at a later date, essentially preserving the data (Frankel & Siang, 1999). Furthermore, email contact brings up new issues that traditional mailing procedures do not, such as viruses being passed to computers. Although primarily conjecture by this researcher, the relative novelty of the internet and safety concerns seemed to be the primary reason for higher levels of protection of email addresses. For example, although home mailing addresses receive unwanted mail daily, SPAM (unwanted email or “junk” email) seems to be more of an issue to individuals. In fact, several individuals contacted this researcher before volunteering and completing the survey to make sure the survey was legitimate, despite writing the survey was approved by the institutional review board of Virginia Tech. They were concerned the email was SPAM that could potentially lead them to an unwanted website.

In addition to the heightened protection of email addresses, getting a person to respond to an email that is potentially SPAM is difficult. Essentially, a traditional home mailing on university letterhead would at least be more likely to get an individual to open the letter than a 6-8 word subject heading in an email. In addition, far more emails are electronically undeliverable than would likely occur in a traditional mailing. This is due to the rapid changes individuals can have with email addresses, and the fact that one individual may have multiple email addresses, an occurrence that is less likely with traditional mailings. These factors contribute to a lower response rate with internet based researched. Essentially the recruitment rate of participants in on-line survey research is consistently low, but once a recruited sampling frame is attained, the response rate is higher (Duffy, 2002). A recruited sampling frame of 534 professional clinical counselors who see at least 5 clients per week was drawn from membership list of various state clinical counseling organizations for this project.

A total of 215 of the 534 eligible counselors responded to the survey (47%), including 154 (71.6%) females and 61 (28.4%) males. Race was characterized by 196
Caucasians (91.2%) and 19 minorities (8.8%). Ages of participants ranged from 24-70 with the mean age of the sample being 44.97 with a median of 46.00. These numbers are consistent with estimated numbers of the American Counseling Association (ACA), whose demographic make-up consists of 71% women, 89% Caucasians, and a mean age of 42.1 years. The ACA is a good hallmark for the demographic make-up of the counseling profession.

Number of years of experience counseling ranged from 0.5 to 40 with the mean number of years of experience counseling being 11.44 with a median of 10.00. All 4 AMHCA regional areas of the country were represented in the sample including the Northeast, the Midwest, the South and the East. With respect to work setting 18.6% work in a community setting (not privately), 40% work in private practice, 10.7% work as a school counselor, 3.3% are students and 27.4% work in other arenas. For licensure, 74% of respondents are licensed professional counselors, 12.1% are license eligible, but are not currently licensed, 10.2% are nationally certified counselors, but are not licensed (some states do not have licensure) and 3.7% are not licensed. In characterizing their workplace setting, 38.6% are urban, 38.1% are suburban and 23.3% are rural. Differing levels of education were represented with 3 having earned a bachelor’s degree (1.4%), 158 having earned a master’s degree (73.5%) and 54 having earned a doctoral degree (25.1%). Finally, 182 (84.7%) are members of a state clinical counseling organization and 33 (15.3%) are not. Although estimate statistics are not available in these demographic categories comparisons are made to studies in the following table.
Table 5.1- Demographic Comparisons

<table>
<thead>
<tr>
<th>Study</th>
<th>Mean Age</th>
<th>Caucasian</th>
<th>Women</th>
<th>Mean Experience</th>
<th>Educational level (Masters)</th>
<th>Private Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holcomb-McCoy &amp; Myers (1999)</td>
<td>46.5</td>
<td>90%</td>
<td>68%</td>
<td>13.8</td>
<td>79%</td>
<td>32%</td>
</tr>
<tr>
<td>ACA (2003) Estimates</td>
<td>42.1</td>
<td>89%</td>
<td>71%</td>
<td>Unknown</td>
<td>68%</td>
<td>30%</td>
</tr>
<tr>
<td>Current Dissertation</td>
<td>44.97</td>
<td>91.2%</td>
<td>71.6%</td>
<td>11.4</td>
<td>73.5%</td>
<td>40%</td>
</tr>
</tbody>
</table>

These demographic characteristic comparisons suggest that the sample for this project is relatively similar to those of published studies and to the make-up of the American Counseling Association. Despite the similarities of these groups, only exploratory results will be reported and overall generalizations to the counseling profession will not be made. For example, by the very nature of this project, individuals who are more technologically inclined will respond to this survey, as evidenced by the counselor self-reported internet competence scale seen in graph 4.4. In referencing this graph, counselors’ mean self-reported internet technological competence for this study is 5.46 on a seven point scale with seven being high internet competence. Clearly, the respondents to this survey characterize themselves as competent in regard to the internet and counseling practice. Otherwise, a mean closer to 4 would have been obtained.

The sample for this study, using traditional background demographics such as gender, age and race, is characteristically equivalent to the counseling profession as a whole, using ACA estimate numbers as a benchmark. The content of this study, internet use and its impact on the profession, was likely influenced by the make-up of the sample in that they had high internet competence. Nevertheless, statistical analysis and created scales were used to compare the sample in such a way as to limit this concern (For example, the sample was separated into groups of low internet competence, medium internet competence and high internet competence for many analyses).
Research Question 1

What are the current self-reported technological and internet competencies of clinicians in practice, and to what extent do counselors use the internet in their practice?

As noted in the previous section, counselors rate themselves highly in terms of internet competence with a mean of 5.46 and a standard deviation of 1.08 on a seven point scale. This suggests that counselors in this sample know the internet well as it relates to counseling. Table 4.4 elucidates the specific uses of the internet by the counselors in the sample. In referencing this table, over 50% of the sample use the internet in at least seven different categories and over 25% percent of the sample use the internet in all 12 topic areas listed on the instrument. In fact, many counselors added other topic areas of interest involving the internet in practice. As illustrated here, the internet has many possibilities in the realm of counseling, and counselors are using the internet in many different ways. The aforementioned list shows how the internet is an excellent adjunct for counselors.

Counselor awareness of the importance of the internet and how it can be used directly with clients and how it can be used as an adjunct tool are crucial components to the counseling profession. A better understanding of the internet and counseling applications can help counselors to effectively serve clients (Sampson, Kolodinsky, & Greeno, 1997). This dissertation supports the notion that the internet has a plethora of capabilities to help with the counseling profession.

In addition to needing to have knowledge about the internet as an adjunct aid, counselors will increasingly need to know how the internet influences the daily lives of their clients (Gore, Leuwerke & Krumboltz, 2002). Even if a counselor does not use the internet themselves, it is likely that clients will come to sessions with the internet as a topic. Table 4.5 demonstrates that the internet has become a pervasive topic point for clients. In referencing table 4.5, counselors report that they have seen clients who have brought up topics in many different areas; over half of the surveyed counselors have
explored such topics as email, chat rooms, internet relationships, research of presenting concerns, and internet pornography. Over one quarter of the surveyed counselors report topics such as instant messaging, family time related to computer use, buying and selling items, internet addictions, internet infidelity, career development, researching medications on-line, internet safety, and on-line support groups. As evident, the internet is frequently an important component of client’s lives. This supports the statements that information technology is becoming a significant part of daily life (Hughes, Ebata & Dollahite, 1999); that the daily lives of individuals are undergoing complex changes resulting from the growth of technology in our society (Gore, Leuwerke, & Krumboltz, 2002); that, “Technology has become an integral part of virtually every aspect of the human experience” (2002, p.848) and, that technology has had a profound impact on daily life (Hohenshil, 2000).

As the internet becomes an integral part of daily life, it will be an important component for counselors to investigate in sessions. Despite this reality and despite high internet competence themselves, counselors do not discuss the internet in their sessions at a very high rate as evidenced in Graph 4.6. When referencing this graph, the average in session discussion of the internet is 2.7 with a standard deviation of 1.41 on a 7 point scale. One would expect that this mean number would be closer to 4, especially considering the sample is of relatively high competence of the internet itself. This clearly shows that there is a disparity between knowledge of the internet and talking about it with clients in counseling sessions. This is clear evidence that although the potential of technology to play a role in counseling has been recognized (Harrison &Stephen, 1996), the day to day work of counselors seems to be unchanged (Chandras, 2000).

In contrast, the overall use of the internet in counseling practice, which includes the counselors’ uses that do not actively involve clients, is seen in Graph 4.5. The mean overall internet use is 3.4 with a standard deviation of 1.31. This mean number is closer to the expected mean of 4.0, but is still somewhat low. This is further evidence that counselors are aware of the internet (high internet competency), but just do not implement their knowledge into their practice.
Research Question 2
What demographic variables are associated with the utilization of the internet in clinical practice?

As part of this project, investigations were made as to whether differing background variables would contribute to the utilization of the internet in clinical practice. Significant differences were recognized in terms of gender, counselors’ age, and age of counselors’ clientele. Other background variables do not contribute to significant differences in internet use for counseling practice. For example, counselors from urban, rural, or suburban modalities are statistically similar.

The first comparison was made based on gender is shown in Table 4.6. By referencing the $t$-test in Table 4.6, there are clearly no differences between genders based on counselors’ internet competence (in fact in this regard they are almost statistically identical). Although there are not statistical differences at the $p<.05$ level, one can see some differences between males and females in the areas of discussing the internet in sessions and overall internet use in practice (both significant at the $p<.10$ level). The higher mean for males on these two scales suggests that males are more likely than females to discuss the internet in sessions or use the internet in their practice.

Studies suggest that gender parity is evident in general internet use (Rainie & Kobut, 2000). Similarly, gender parity for internet competence is evident between genders in this project, as noted by the almost statistical equivalency of the two groups in the sample. However, gender parity in the implementation of the internet in the counseling process appears to be lagging behind.

A second analysis was done based on age and is reported in the correlation matrix in Table 4.8. This tables suggest there are significant differences based on age in the counselor competence scale and other two scales. Essentially, younger counselors scored higher on each respective scale, and as age went up, counselors scores on the scales went down.
According to the U.S. Department of Labor, Bureau of Labor Statistics (2003), the age grouping between 26 and 33 was the most likely to own a computer; children as young as age 5 were learning about computers and the internet in school with schools increasingly utilizing computers in the classroom; and on overall increase in internet activity was reported. Quite simply, younger generations are being raised in a technologically enriched environment with the expectation and requirement of using the internet. Not surprisingly, this project demonstrates that younger generations of counselors have higher levels of internet competence, and these numbers will likely continue to rise.

Interestingly, despite this difference in competence, there are not statistical differences between ages on use and discussion of the internet in practice. One can see that there are mean differences between the age groups, but they are not statistically significant. Despite their high level of internet competence, younger counselors do not employ the internet in the counseling profession in any statistically different way than older counselors. Once again, despite high internet competence, the day to day work of counselors seems to be unchanged (Chandras, 2000).

Lastly, in looking at age of clientele, there are statistically significant differences present. In referencing Table 4.9, which is an ANOVA table based on age of the counselors’ clientele, there is a significant difference at the p<.05 level for counselors’ in session discussion of the internet. This is marked by the major difference between counselors who see clients in the age 18-26 category as compared to the other age categories. Simply put, counselors whose predominant clientele are young adults (ages 18-26) discuss the internet in sessions more frequently than any other clientele age classification. This researcher hypothesizes, although predominantly conjecture, that differences would also have been present in the younger clientele age classification if it were separated between counselors who see predominantly adolescents (age 13-18) versus young children (ages 12 and under), a demarcation not made when this survey
instrument was created. This researcher, after looking through this data, suggests a further breakdown of age classifications.

**Research Questions 3 and 4**

**What are counselor’s perceptions of their client’s knowledge and use of the internet, as it relates to the client’s own mental health and treatment?**

**How might perceptions of a client’s utilization of the internet be related to that counselor’s own knowledge and use of the internet?**

To gain a better understanding of how counselors perceive their clients use of the internet, 2 scales were developed and can be referenced in graphs 4.7 and 4.8. The means for these scales are 2.33 for perceptions of clients’ discussion of the internet in session and 2.00 for perceptions of clients’ use of the internet in relation to their treatment. On first glance, these numbers appear low and that clients are not really using the internet that much in relation to treatment. However, as posed in research question 4, one would suspect that the aforementioned scales would be affected by the counselors’ own use and discussion of the internet, as was the case. As seen in the correlation matrix in Table 4.10, perceptions are influenced by counselors’ own use of the internet in their practice. This table illustrates that there are significant differences between counselors who use the internet themselves and are more open to discussing the internet and their subsequent perceptions of their clients’ use of the internet. Simply put, the more counselors talk about and use the internet as part of their practice, the more they see it as a component of their clients’ topics of interest. This is not surprising since counselors are trained to help guide the content of sessions, and counselors who see the internet as a part of their practice will be more open to discussing the topic.
Research Question 5

How do counselors perceive the impact of the internet on clients in general or to the counseling profession as a whole?

Finally, the impact of the internet on the counseling profession in general was investigated. For this part of the project, counselors were asked about the internet as it relates to the profession as a whole, not to just their individual practices. Clinical counselors were asked questions that dealt with counselors as a professional group and with what they think would be important for clients. The impact of the internet on clients in general is summarized by and can be referenced by Graph 4.9. In gathering data for this scale, counselors were asked if they think the internet is a good resource tool to use with clients, if the process of counseling is improved by using the internet, if counseling websites provide reliable information regarding mental health and if that information is more useful to clients when investigated in sessions. The responses and the mean for this scale came out much differently than the actual use and discussion means. In fact, the mean for this scale was 4.25 with a standard deviation of 1.32, whereas the means for the use and discussions scales were closer to 2.00. A $t$-test indicates there were statistically significant differences between the two means. Furthermore, as was evident with perceptions of clients’ internet use and discussions of the internet as compared to counselors’ own internet use, this scale also shows significant differences between the groups as seen and illustrated in the correlation matrix shown in Table 4.11. As counselors use and discuss the internet at higher levels, they also see the internet as having an impact upon the counseling profession as a whole.

Counselors who have a high internet competence, who have high internet use in practice and who have frequent discussions of the internet in practice view the internet as an important component to counseling in general. The means of the impact of the internet on the counseling profession slowly go down as the high internet competence and high internet use and discussion scale means go down. In other words, these factors correlate with one another in a significant matter. Quite simply, the counselors who have a high internet competence and high internet use see the internet as an important component of
the counseling process. Nevertheless, even including members from the lower groups which outnumbered the higher groups by a margin of over 5 to 1, the importance of the internet to the profession as a whole with all the participants involved had a mean of 4.25. This suggests that the internet is a pervasive component to the counseling process, and most counselors are aware of this, regardless of their own internet competence. Nonetheless, the gap between knowledge and putting that knowledge into practice is still lucid.

Emerging technology, especially the internet, perpetually changes the environment of mental health care, continuously changing tools and options available to psychologists; it becomes imperative that new technological competencies be developed by counselors and incorporated into research and practice (Jerome & Taylor, 2000). Just as millions of Americans are joining the connected world of the internet, many psychologists and counselors are realizing the benefits of utilizing technology in their practice in some way. Internet resources provide quick access to mental health information (Guterman & Kirk, 1999), and clients will begin to have some expectation of utilization of this resource in their therapy. Rapid advances in computers and technology represent one of the most profound changes facing counselors and psychologists today (Gore, Leuwerke, & Krumboltz, 2002). Counselors should embrace internet technology into the profession, lest the profession fall behind in an ever technologically expanding world.

Implications

The implications of this study to the counseling profession are profound. The internet is clearly becoming an integral part of daily life and clients, in much larger numbers that are increasing daily, are coming to counseling sessions with internet topics in mind. Counselors would be remiss to exclude from their practice the potential impact of the internet on clients. It is important for highly internet competent counselors to take internet information and actively bring it into sessions, and for counselors with low internet competence, it is important to make an effort to increase their internet knowledge base. Indeed, incorporating technology into the mental health profession is a profound
paradigmatic shift facing the counseling profession (Gore, Leuwerke, & Krumboltz, 2002). Listed below are several implications.

1. Because we now know that counselors increased knowledge and use of the internet may help open the door for clients to explore internet topics, counselors can benefit clients by incorporating their internet knowledge into practice. Specifically, counselors could investigate as part of their cultural assessment with clients the topic of the internet. Often clients’ presenting issues are confounded by topics that are not readily discussed initially, and a part of the underlying thoughts of that client may be influenced by internet considerations (i.e. internet infidelity, internet addiction). Counselors could actively explore this content area as part of their case conceptualizations with clients to rule it out as an issue. Furthermore, counselor educators could incorporate internet components into lessons about case conceptualizations of clients (i.e. Is your client an active internet user and if so, in what ways do they use the internet in regards to their mental health?).

2. Since this study shows that the internet is increasingly becoming a component of the counseling process (younger generations as shown in the correlational data have higher levels of internet discussion in sessions, so this topic will increasingly be relevant), it is important for counselor educators to prepare their students in this regard. In the orientation to counseling course, students could be required to do an assessment of available resources on the internet that pertain to counseling. In the DSM course, they could compare internet sites that explain different diagnoses with what is contained in the DSM. In the group counseling course, students could evaluate an on-line support group and share their assessments with their class so support group resources could be discovered. As mentioned previously, in practicum, students could incorporate questions about the internet into their case conceptualizations with clients. They could subsequently share internet resources in supervision and discuss the specific components of their counseling processes that were complimented by the internet. In the assessment
class, students could evaluate on-line assessment tools and compare them with traditional assessment tools. The internet has the potential to be an adjunct to any course that is taught, and if it is incorporated into daily coursework, students who may be timid in relation to internet technologies would slowly gain comfort.

3. Counselor educators could consider internet components to coursework in both the traditional classroom and in courses taught on-line. It is important not to dichotomize these two entities such that students only use the internet in on-line courses. This only reinforces what is abundantly clear in this study, counselors are very competent about internet information, but do not actively use it in sessions. Counselor educators could be aware of this and incorporate internet resources from previous coursework into practicum, supervision and field work. Simply put, counseling students could be encouraged to implement their internet resources in face to face contact. Since the numbers in this study indicate a trend to client expectation of discussing the internet, counselor educators would be better preparing their students by doing this.

4. Younger generations of clients will themselves have higher levels of internet competence and use, as shown in this study in the correlation matrix of clientele age. Younger generations are growing up who have no recollection of a time when computers and the internet were not present (Greene, 2000). As this generation gets older, the incorporation of internet faculties to practice will be increasingly important. This study already shows high internet discussions for clientele in the age range of 18-26. If clients increasingly expect to discuss internet considerations, counselors in turn will need to have the internet competence to follow them. As such, perhaps counselors with lower internet competence, regardless of age, should look into learning about this topic.

5. Interpretation of this data suggests that being more open to discussing the internet may lead to clients talking about this as a part of their concerns. This is especially important if a client’s presenting concern may be wrapped up in a topic that deals
with the internet. For example, a person may come in reporting that they are having familial or marital difficulties and perhaps these difficulties stem from a spouse who is spending large amounts of time on the internet. Then this would be an important component of treatment. Most likely, this would eventually come up in the counseling process, even for counselors who, in terms of this project, are low internet users. But less obvious, are clients who are computer and internet savvy who come in for treatment who may have already researched their presenting concern or may be open to looking to the internet as a tool to help with their counseling. Counselors in the medium to low use and discussion categories may miss a golden opportunity to help a client, despite the fact they too are computer and internet savvy. Much like bibliotherapy is an important component to a lot of counselors’ practices, the internet could be used as a resource tool in much the same way.

6. If trends merely highlighted in this study continue, perhaps clients may be more willing to research self-help in the privacy of their own home by using the internet. If clients are doing their research with this medium, it is imperative that counselors know what is out there to help clients discuss what they learn. The highest single mean for an instrument item in this study was “information clients gather from the internet is more useful when discussed in sessions”. Clearly this is an important issue to the counselors in this study. Counselors with higher internet competence could help direct clients toward specific websites they know could benefit clients with specific needs. Much like current counselors often have ideas of self help books they use to compliment their practice, ideas of self-help websites or informational tools may be relevant. Counselors can be prepared to discuss what specific content clients bring to sessions, and now more than ever, counselors could have multiple media outlets for outside resources, incorporating the internet with traditional items such as books, tapes or workbooks.

7. As both an exercise for current counselors and for counselor educators to assign their students, individuals could do a brief personal content analysis of resources
available on the internet that pertain to them, to their counseling beliefs, and to their counseling practice. This would include a short list of references for them to access in their future endeavors. Counselors could look for things like accuracy, content, and user friendliness. Much like counselors slowly acquire resources to use with clients, the internet can provide many new ideas. Counselor educators may realize this as an excellent assignment for novice counselors who may be craving resource ideas.

8. Counselors in this study felt that the internet had an impact upon clients in general and upon the profession itself, yet despite these numbers, counselors tend to distance themselves from actual internet use and discussion in practice. Although purely speculation, perhaps counselors distance themselves from the internet because they do not see how such an instrument that may be seen as limiting human interaction could fit into a field historically built on human interaction. It would seem that the foundations and historical antecedents to the profession do not coincide with what may be viewed as an impersonal instrument. Yet the assimilation of the internet in a technologically driven world could nonetheless be considered, and myths about the impersonality of the internet could be minimized.

9. As an example of the wealth of information on the internet, counselors reported they have had experiences with clients beyond the focus of this study’s instrument. Examples include, researching mental health insurance to cover their counseling; visiting sites that improve concentration and focus (particularly helpful for young children with ADHD who may be drawn toward using a computer); doing background searches on new acquaintances to find out more personal information, history and genealogy; and internet dating and meeting people.

10. Further evidence that counselors should be aware of the internet and its impact upon clients is the negative components of the internet. As one respondent noted, “clients may access websites that speak of the ‘evils’ of psychotropic drugs and
hold that as truth, a danger to the internet.” Another respondent says, “Often clients access the first site that pops up in their mental health search and hold this as god speak, true internet research takes time, and often clients don’t understand this.” These examples again support the notion of in session discussion of what clients discover on the internet, because a lot of information could be misleading.

11. One respondent highlights the importance of asking about the internet in sessions. This counselor said, “Prior to taking a cyberspace addiction workshop, I used to only talk about the internet with clients if they brought it up.” This is what this researcher implies from the data of this study for a large portion of clinical counselors. This counselor went on, “Now I routinely ask my clients about computer and internet use and 1 in 3 respond positively.” Similar numbers to these of course will likely depend on clientele, but will likely show up in large numbers in counselors offices. Finally this counselor said, “Surprisingly, about 1 in 10 of my clients have internet addiction or internet abuse as a problem, and half of those do not see it as an issue!” Again, the internet is pervasive, as shown in this example.

12. On the other hand, there are counselors who are specifically against the use of the internet. On counselor says, “My counseling base is geared toward short term therapy that gets clients involved in social and recreational change. I don’t like internet activities for clients because it pulls them inside. I rarely use the internet myself, and I do not use it with clients.”

**Recommendations for Future Research**

This project was intended to look at an aspect of counseling that appears to be under studied and has very few peer-reviewed publications. Most of the to date literature explains the implications of the internet to counseling without supporting data or research. Interestingly, just as this study showed that counselors are very aware of the impact of the internet on the profession with little individual activity in practice, so does the literature follow with articles about internet content, but without implicit research
endeavors developing specifics. Listed below are some ideas and recommendations for future research that this researcher derived from this research endeavor.

1. A systematic approach to a counseling practicum class could be done where half of the class is randomly assigned to an “internet exploratory” group and half of the class is the control group. In the internet exploratory group, counselors would specifically ask about internet use in their sessions, they would specifically discuss and give homework assignments involving the internet, and they would talk about the internet in subsequent sessions. As one respondent to the survey noted that SES is a significant factor in internet use of her clients, the group could look at SES and other background variables of the internet proficient clients versus the non internet proficient clients in the “internet exploratory group”. They would subsequently compare the control group with the research group. Lots of specific dynamics related to the counseling process and the internet could be uncovered.

2. A content analysis of internet resources available to counselors evaluating content of individual websites would be beneficial. Since anyone can post any kind of information on the internet, it would be important to filter out misinformation. This kind of study would be important in that it would provide an extensive list of on-line resources for future counselors. This could be an excellent group project for students in a class. A class could be separated into groups each assigned to do a content analysis in a particular area, and the final results could be compiled into an exhaustive list.

3. Targeted research dealing with internet addiction, internet extramarital affairs and more in depth analysis of other topic areas brought up by clients and only highlighted in this study would be useful. For example, one could look at internet addiction and systematically come up with factors that contribute to this phenomenon.
4. In depth analysis of client “self-diagnosis” or “self-help” using the internet would seem to warrant investigation. This could be done by asking clients about their own internet research as it relates to their mental health, asking questions like, what have you learned about your mental health?; what information have you found that relates to your symptomology?; or what kind of informational sites have you visited?.

5. Evaluation of clientele access to the internet could be an important component within a study. This would be a simple analysis of what factors contribute to clients’ access to the internet.

6. Repeating this study using a random sample of counselors and using a different modality to disseminate the instrument would lead to higher generalizability.

7. An analysis of counselor education programs with a specific focus on how the internet is used in each class could be done. This would evaluate how future counselors are being trained in relation to the internet.

8. Another study could be done with counselor education students where the counseling students are classified into low, medium and high internet groups based on a similar instrument to that in this study. The groups could then be compared on a variety of factors evaluating any differences in their counseling activities.

9. An evaluation of counseling supervisors to see if they are incorporating internet resources into their supervision practices and counselor training might be useful. This would help to delineate the needs of supervisors in this area.

10. More research should be done looking at the negative impacts of the internet on daily life and to the profession of counseling.
11. Exploratory research in the area of counseling can benefit from another kind of research protocol, namely on-line research. Nationwide samples can be targeted at a minimal cost. Although this methodology abandons the quasi-experimental approach, much of research in the human services fields relies on exploratory kinds of endeavors.

**Summary**

This study shows that the internet can be an important component to the counseling profession. It is clear that clients will increasingly come to counseling sessions with the expectation of discussing internet material. New technologies are developed daily and the internet and its number of users continue to grow. The counseling profession needs to keep up with technological advances, realizing that technology is not intended to replace human interaction completely. Historically speaking, the counseling profession was built on human interactions and will continue to rely on those interactions to help clients. The internet can be used to enhance the counseling experience. Technology can be used to an advantage, while maintaining the power of the human connection in face-to-face counseling.
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Appendices

Appendix A- Letters for Participation and Recruitment

As the president of ________ I thought you might be a good contact to disseminate my survey to your members for research. Please read the following and take a look at the survey and email me with your decision.

Hello, my name is Ryan Greene and I am a counselor education doctoral student at Virginia Tech. For my dissertation research, I am looking at the ways the internet has an impact upon clients and the counseling relationship. Professional input regarding clinical counseling interactions is an important component of this research.

To secure a sample, I am requesting that state clinical counseling organizations forward an email with a link to my survey to their members, which is where I need your aid. As the president of your state’s clinical counseling organization, I am requesting you pass the below email to your diverse member group. The survey consists of 45 short questions that will take approximately 5-10 minutes to complete. The study is approved by the institutional review board of Virginia Polytechnic Institute and State University (VA Tech).

In exchange for your aid in getting out the survey instrument to your members, I will be compiling a comprehensive list of internet resources for clinical counselors that I will send to your organization. You will be able to create a link on your organizations website to this comprehensive list of resources that can potentially benefit your members. This set of resources will be compiled from the survey itself, so response numbers are important.

Please take a moment and look at the survey by clicking the link below or “cutting and pasting” the link into your web browser. Feel free to fill out the survey so you can assess whether you will pass the survey on to your members

http://survey.vt.edu/survey/entry.jsp?id=1037366009527

Quite simply, I am asking you to cut the following email invitation (at the bottom of this email) and paste it into a new email to forward to all of your state organization’s members, using whatever method used to disseminate information to your members, such as a listserv or a mass emailing. Please respond to rygreene@vt.edu if your organization can participate and to ask any questions. Furthermore, my home telephone number is (540)-387-2759 if you would like to discuss the project or ask any questions.

Thank you for your valuable time and input,

Sincerely,
Ryan T. Greene
Doctoral Candidate, Counselor Education at Virginia Tech
Here is the email invitation I would like you to forward to your members:

Hello, my name is Ryan Greene and I am a counselor education doctoral student at Virginia Tech. For my dissertation research, I am looking at the ways the internet has an impact upon clients and the counseling relationship. Your professional input regarding clinical counseling interactions is an important component of this research, whether you use the internet frequently or not. The survey consists of 45 short questions that will take approximately 5-10 minutes to complete.

The study is approved by the institutional review board of Virginia Polytechnic Institute and State University (VA Tech). If you wish to participate, please send your email address to rygreene@vt.edu. Your email address will be kept strictly confidential and will only be used for the purposes of this project. Your email will not be linked to your survey responses at any time, so you will be able to complete the survey anonymously. As an incentive to complete the study, you will have an opportunity to attain a list of compiled internet resources that can be useful in your own counseling practice. If you have any questions, please email rygreene@vt.edu.

Thank you for your valuable time and input,

Sincerely,
Ryan T. Greene
Doctoral Candidate, Counselor Education at Virginia Tech

Letter 2-

Thank you for volunteering to be a participant in important research regarding the internet in clinical practice. Please click the link below to access the survey instrument. Remember that by clicking the survey instrument link, you are in no way obligated to complete the survey, you may simply close your browser at any time. So feel free to just take a look. Remember that by completing the survey, you will have an opportunity to receive a compiled list of internet resources.

http://survey.vt.edu/survey/entry.jsp?id=1037366009527

Again, thank you for your valuable time.

Sincerely,
Ryan T. Greene
Doctoral Candidate, Counselor Education at Virginia Tech
Appendix B- Pilot Instrument

Your aid is needed to create a survey instrument being sent out to clinical counselors across the country for a dissertation project. This researcher is looking at what different kinds of ways the internet comes up in face to face sessions with clients. The following questions are some open-ended pilot questions to brainstorm and stimulate ideas for this project. Any information you can provide will be helpful. Your time is greatly appreciated.

1. List short anecdotal situations were a client has discussed the internet in the counseling session.

2. What topics have clients brought up related to the internet?

3. In what ways do you use the internet in your clinical practice?

4. In what ways do clients use the internet related to their counseling treatment

5. Please add any information you feel may be useful related to this topic.

Appendix C- Survey Instrument

The Internet in clinical counseling practice: A Survey

Your clinical experience with clients is crucial to the integrity of this study. Thank you for volunteering your time to complete this survey.

As an incentive to complete this survey, you can receive a compiled list of internet resources to use in your own counseling practice. Simply follow the instructions after you submit your survey.

This survey project was approved by the Institutional Review Board of Virginia Polytechnic Institute and State University. Since the risk involved for participants is minimal, the study is exempt from written informed consent. Completing this survey online carries the same risks involved in any other use of email or web browsers: information could be intercepted and read by a third party. I encourage you to seek assistance at any point during this survey process by contacting me via email at rygreene@vt.edu.

Inclusion in the final analysis requires that you see at least 5 clients face to face on average in a given week.

Instructions

1. For responses with an answer field box, put the cursor on the box and click, then type in your response.

2. For multiple choice "bubble" questions, click on the bubble that best answers that question.
1. On average, how many clients do you see face to face in a week?

Section 1-
Use the seven point scale below as you think it relates to your face to face interactions and discussions with your clients during counseling sessions over the last year. You may estimate your answers anywhere on this seven point scale.

1-None or almost none of my clients
2
3
4-About half of my clients
5
6
7-All or almost all of my clients

2. Clients discuss home personal computer use

3. Clients discuss the internet

4. Clients discuss their utilization of on-line support groups

5. Clients discuss information gathered from websites related to their presenting concern

6. Clients discuss on-line relationships

7. Clients discuss computers and the internet as a source of stress

8. Clients discuss the internet as a leisure activity and a way to reduce stress

9. Clients discuss addictions regarding internet use

10. Clients discuss using the internet as a communication tool to contact friends and family (i.e. instant messaging, e-mail)
Section 2-
Continue to use the following seven point scale as it relates to your perceptions of clients and their use of the internet.
1-None or almost none of my clients
2
3
4-About half of my clients
5
6
7-All or almost all of my clients

11. Clients utilize the internet to research their diagnosis or presenting concern
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

12. Clients utilize the internet to research medications
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

13. Clients use internet material to question approaches to their treatment
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

14. Clients utilize the internet for requested homework assignments
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

15. Clients utilize email to notify of appointment changes or cancellations
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

16. Clients use email to report of progress between sessions
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7
Section 3-
This section relates to your perceptions of the internet as it relates to the counseling relationship and profession as a whole. Respond to whether you agree or disagree using the following seven point scale.

1-Strongly Disagree
2
3
4
5
6
7-Strongly Agree

17. The internet is a good resource tool to use with clients
[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7

18. The process of counseling is improved by using the internet
[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7

19. Counseling websites provide reliable information regarding mental health concerns
[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7

20. On-line material gathered by a client is more useful when that information is discussed and explored in a counseling session.
[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7

21. The internet is a good research tool for counselors
[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7

22. The internet is a good research tool for clients
[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7
Section 4-
For the following questions, please rate yourself on the following scale.
1-low
2
3
4
5
6
7-high

23. My knowledge of the internet

24. My knowledge of websites related to mental health

25. My knowledge of computers in general

26. My use of internet resources in providing homework for my clients

27. Frequency of discussing internet information in my counseling sessions

28. My use of the internet to research mental health topics

29. My overall comfort level with the internet and computers
Section 5-
Answer the following by clicking all that apply to you and your practice.

30. What topics have clients brought up related to the internet? (Check all that apply)

- Internet relationships
- Internet addiction
- Pornography
- Buying and selling items on-line
- Internet safety
- Chat Rooms
- Research
- Instant messaging
- Email
- On-line support groups
- Medication on-line
- Internet infidelity
- Career development and research
- Family time related to computer use
- Gambling or gaming sites
- Financial concerns
- Medical procedures

Other topics (please put in list format)

31. In what ways do you use the internet in your professional practice? (check all that apply)

- Researching mental health concerns
- Referrals
- Scheduling using email
- Filling out forms/paperwork
- Professional correspondence
- Professional associations
- Informational listservs
- Finding community resources
- Staying up to date on current research
- Connecting with managed care companies/insurance
- Ideas for homework
- Researching medications

**Other uses (please put in list format)**
32. This study is also designed to help compile a list of internet resources frequently used by counselors. Please list any specific websites you utilize related to counseling.

Section 6-
Demographic information

33. How many years of clinical counseling experience do you have? (Please give a numerical response)

34. Please check all that apply to you.
   - Licensed Professional Counselor
   - License eligible, but not yet licensed
   - Nationally Certified Counselor (NCC)
   - Not licensed, not eligible
   Other: 

35. What best describes your current position? (If more than one, please select the setting where you have the most face to face client interactions)
   - 1. Community Counselor (i.e., Working for a community services board)
   - 2. Counselor in a Private Practice
3. School Counselor
☐ 4. Student
☐ 5. Other, please specify:

36. What best describes you work setting?
☐ 1. Urban
☐ 2. Suburban
☐ 3. Rural

37. What is your gender?
☐ 1. Male
☐ 2. Female

38. What is your age?

39. What best describes your ethnicity?
☐ 1. African American
☐ 2. Asian/Pacific Islander
☐ 3. Caucasian
☐ 4. Hispanic
☐ 5. Native American
☐ 6. Other, please specify:

40. What is your highest level of education?
☐ 1. High School Diploma
☐ 2. Some college, without a degree
☐ 3. Associates Degree
☐ 4. Bachelor's Degree
☐ 5. Master's Degree
☐ 6. Doctoral Degree
41. Are you a member of AMCHA (the American Mental Health Counselors Association)?
   1. Yes
   2. No

42. Are you a member of a state clinical counseling organization?
   1. Yes
   2. No

43. Using an abbreviation, in what state do you reside?

44. What best describes the majority of your clientele?
   1. Children and adolescents (ages 1-18)
   2. Young adults (ages 18-26)
   3. Adults (ages 26-64)
   4. Seniors (ages 65+)
   5. I see clients of all ages

45. Add any additional information relative to the study

Please read before submitting
All information filled out in this survey will be kept strictly confidential. No identifying information will be used in reporting the results of this project. By submitting your answers to this survey, you are volunteering to be a participant in the survey and you are giving an implied consent.
This is the message received after submitting the survey-

Thank you for your valuable time in completing this survey. As a thank you for completing this survey, I can send you a list of compiled resources from the final question on the survey. If you would like this list, please send your email address to rygreene@vt.edu. Put resource list in your subject heading and type only your email address in the body of the email. Note: Your email address will be kept strictly confidential and it will not be tied to your responses to this survey in any way. It will only be used to send a resource list. HAVE A GREAT DAY!!!!!
Appendix D- Individual Item Frequencies from the Survey Instrument used to Create Scales (Items 2-29)

Item 2-

clients discuss home computer use

![Bar graph showing frequency distribution for Item 2. The x-axis represents different frequency levels, and the y-axis represents frequency counts. The graph shows the distribution with a peak around the 2.0 mark, indicating the most common response. The mean is 2.7, the standard deviation is 1.59, and the sample size is 215.00.]

Item 3-

clients discuss the internet

![Bar graph showing frequency distribution for Item 3. The x-axis represents different frequency levels, and the y-axis represents frequency counts. The graph shows the distribution with a peak around the 2.0 mark, indicating the most common response. The mean is 2.7, the standard deviation is 1.58, and the sample size is 215.00.]

Item 4 -
clients discuss utilization of on-line support groups

Item 5 -
clients discuss websites related to presenting concern
**Item 6-**

clients discuss on-line relationships

- Frequency distribution
- Std. Dev = 1.18
- Mean = 2.0
- N = 215.00

**Item 7-**

clients discuss the internet as a source of stress

- Frequency distribution
- Std. Dev = 1.17
- Mean = 1.8
- N = 215.00
Item 8-

clients discuss the internet as a leisure activity

Item 9-

clients discuss internet addictions
Item 10-

Clients discuss the internet as a communication tool

Item 11-

Clients utilize the internet to research diagnosis
Item 12-

Clients utilize the internet to research medications

![Bar chart showing frequency distribution with mean and standard deviation]

- Frequency: 74, 61, 41, 19, 13, 7
- Std. Dev = 1.32
- Mean = 2.4
- N = 215.00

Item 13-

Clients use internet material to question treatment approaches

![Bar chart showing frequency distribution with mean and standard deviation]

- Frequency: 122, 54, 27, 10
- Std. Dev = .95
- Mean = 1.7
- N = 215.00
**Item 14-**

Clients use the internet for requested homework

![Graph showing frequency distribution for Item 14.](image)

- **Frequency**
  - 100 clients use the internet for requested homework
  - 131 clients use the internet for requested homework
  - 40 clients use the internet for requested homework
  - 23 clients use the internet for requested homework
  - 7 clients use the internet for requested homework
  - 7 clients use the internet for requested homework
- **Statistics**
  - **Std. Dev = 1.34**
  - **Mean = 1.8**
  - **N = 215.00**

**Item 15-**

Clients use email to notify of appointment changes

![Graph showing frequency distribution for Item 15.](image)

- **Frequency**
  - 129 clients use email to notify of appointment changes
  - 36 clients use email to notify of appointment changes
  - 24 clients use email to notify of appointment changes
  - 13 clients use email to notify of appointment changes
- **Statistics**
  - **Std. Dev = 1.38**
  - **Mean = 1.9**
  - **N = 215.00**

Clients use email to notify of appointment changes
Item 16-

clients email to notify of progress between sessions

![Histogram showing frequency distribution with mean 1.6, standard deviation 1.06, and N = 215.00]

Item 17-

internet is a good resource tool to use with clients

![Histogram showing frequency distribution with mean 4.4, standard deviation 1.63, and N = 215.00]
Item 18-

process of counseling is improved by using the internet

Item 19-

websites provide reliable information regarding mental health con
Item 20-

on-line material is more useful when explored in counseling session.

![Frequency distribution graph for Item 20]

- Std. Dev = 2.18
- Mean = 5.0
- N = 215.00

Item 21-

internet is a good resource tool for counselors.

![Frequency distribution graph for Item 21]

- Std. Dev = 1.38
- Mean = 5.7
- N = 215.00
Item 22-

internet is a good resource tool for clients

Freqency

Std. Dev = 1.54
Mean = 4.9
N = 215.00

Item 23-

self rated knowledge of internet by counselor

Freqency

Std. Dev = 1.27
Mean = 5.7
N = 215.00
Item 24-

self rated knowledge of websites related to mental health

![Bar chart showing frequency distribution of self-rated knowledge of websites related to mental health.](image)

- **Frequency distribution:**
  - Frequency values: 7, 18, 38, 67, 56, 28
- **Statistics:**
  - Std. Dev = 1.29
  - Mean = 5.1
  - N = 215.00

Item 25-

self rated knowledge of computers in general

![Bar chart showing frequency distribution of self-rated knowledge of computers in general.](image)

- **Frequency distribution:**
  - Frequency values: 6, 18, 42, 51, 59, 39
- **Statistics:**
  - Std. Dev = 1.32
  - Mean = 5.2
  - N = 215.00
Item 26-

Use of using internet resources to provide homework

\[
\begin{array}{cccccccccc}
1.0 & 2.0 & 3.0 & 4.0 & 5.0 & 6.0 & 7.0 \\
70 & 39 & 43 & 27 & 19 & 9 & 8 \\
\end{array}
\]

Std. Dev = 1.70
Mean = 2.7
N = 215.00

Item 27-

Frequency of discussing the internet in counseling sessions

\[
\begin{array}{cccccccccc}
1.0 & 2.0 & 3.0 & 4.0 & 5.0 & 6.0 & 7.0 \\
48 & 62 & 55 & 23 & 18 & 5 & 4 \\
\end{array}
\]

Std. Dev = 1.43
Mean = 2.7
N = 215.00
Item 28-

self rated use of the internet to research mental health topics

Frequency

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<th>2.0</th>
<th>3.0</th>
<th>4.0</th>
<th>5.0</th>
<th>6.0</th>
<th>7.0</th>
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<td>9</td>
<td>22</td>
<td>34</td>
<td>30</td>
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Std. Dev = 1.78
Mean = 4.6
N = 215.00

Item 29-

overall comfort level with the internet

Frequency

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<td>28</td>
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<td>69</td>
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Std. Dev = 1.16
Mean = 5.9
N = 215.00
Appendix E- Complete ANOVA Computations

ANOVA based on Work Setting

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<th>Mean Square</th>
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<th>Sig.</th>
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<td>Between Groups</td>
<td>4.378</td>
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<td>.700</td>
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<tr>
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<td>214</td>
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<td>1.958</td>
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ANOVA Based on Workplace Setting (Urban, Suburban, and Rural)

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<td>Between Groups</td>
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<tr>
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Corresponds with Table 4.5- ANOVA based on age of clientele

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Ryan Greene  
2130 Twelve O’clock Knob Rd., Salem, VA 24153 (540) 387-2759

Education  
- **Ph.D., Counselor Education**, coursework completed, expected May 2003  
- **MS, Family Studies**, May 2000  
- **BS, Family and Child Development**, May 1996  
- **BA, Liberal Arts and Sciences**, May 1996  
  Minors included Chemistry, Biology, and Psychology  
  Each at Virginia Polytechnic Institute and State University

Experience  
For the past five years, as part of my Graduate assistantship and internship responsibilities, I have worked in a clinical setting seeing clients, supervising students seeing clients, assessing and evaluating, treatment planning, keeping documentation, and referring to community resources when appropriate. Licensure eligible.

Experience & Training  
**Counseling Intern and Adjunct Faculty**, College of Health Sciences (2000-)

Responsibilities included-
1. Seeing Clients  
   - Depression, anxiety, relationship problems, physical and emotional abuse, sexual abuse, ADHD, marital problems, substance abuse, crisis interventions, psychiatric referrals, treatment planning, and thorough documentation
2. Teaching  
   - Family Dynamics Course focused on physical and psychiatric illnesses and their affect on the family system
3. Psychological Testing and Assessment

**Graduate Assistant, Supervisor**, Virginia Tech Counselor Education Clinic (2000-)

Responsibilities included-
1. Supervision of Masters level practicum students seeing clients  
   - tracking student and client progress and welfare, looking for red flags indicating potential problems, some crisis intervention both directly and indirectly
2. Documentation of Supervisee’s progresses, goal attainment, and clinical skills
3. Evaluation  
   - student’s treatment planning, case conceptualizations, clinical work, and overall counseling performance

**Counseling Intern**, Cook Counseling Center, Virginia Tech (1999-2000)

Responsibilities Included-
1. Seeing Clients  
   - Depression, anxiety, relationship problems, eating problems, death, substance abuse, borderline personality characteristics, in house psychiatric referrals, treatment planning, and thorough documentation
2. Leading Groups
3. Student Outreach by Setting up informational booths and leading seminars

**Graduate Assistant, Staff**, Adult Day Services of Virginia Tech  

Responsibilities included-
1. Helping care for and interacting with clients/patients
2. Testing and Assessment for Medicaid reimbursement
3. Leading an ongoing caregiver support group 1997-2000

Personal  
Works within, but is not limited to, a client-centered existential approach with an emphasis on biological etiologies where appropriate (the medical model). Has an extensive knowledge of computer applications. Is a self-motivated professional with excellent references.