An Inventory of Web-Based Tools Used to Support the Developing Field of Online Therapy
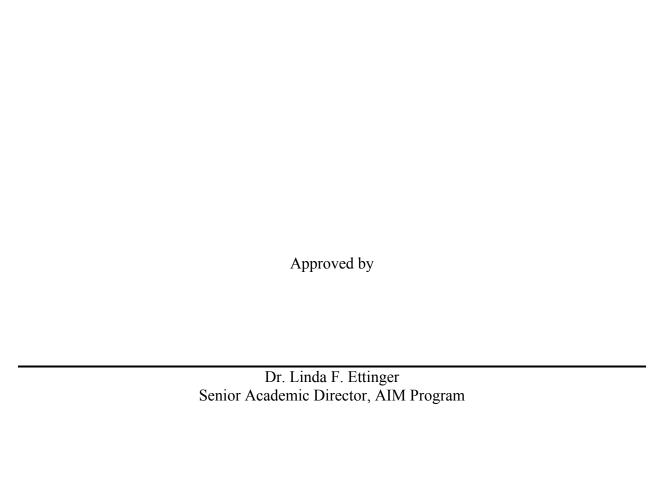
CAPSTONE REPORT

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Abstract

This study provides a descriptive inventory of web-based tools used in the online delivery of psychotherapeutic services. Growth in the field of online psychotherapy means greater opportunity for the professional therapist in offering online psychotherapy services. Tools, in order of popularity, include websites, email, internet relay chat, instant messaging, forum and bulletin boards, video conferencing and webcams, virtual reality software, and text messaging. Tools are used to treat anxiety disorder, mood disorder, and personality disorder.

Keywords: cyberpsychology, etherapy, internet therapy, online psychotherapy

Table of Contents

List of Tables

Introduction to the Literature Review

Purpose

The purpose of this study is to create a descriptive inventory of web-based tools that are being used in the online delivery of psychotherapeutic services. Selected literature is examined that addresses the web-based tools used for web-based psychotherapy interventions, also called *Internet therapy* (Rochlen, Zack, & Speyer, 2004), *Cybertherapy* (Suler, 2002) or *Etherapy* (Finn & Bruce, 2008). The primary goal is to determine what web-based tools are being used in the area of online psychotherapy, and in which areas of psychotherapeutic treatment technology tools are being utilized.

Technology has been used for decades in the world of psychotherapeutic treatment (Lang, Melamed, & Hart, 1970). However, the application of online psychotherapy and web-based tools used for therapy is a relatively new area of psychotherapy that is emerging quickly (Hanley & Reynolds, 2009). According to Barak et al. (2009) online psychotherapy services also called *internet supported interventions* can be categorized into four categories: (a) web-based interventions, (b) online counseling, (c) internet operated therapeutic software, (d) other internet activities (Barak, Klein, & Proudfoot, 2009). The emphasis of this literature review is on web-based interventions, internet operated software, and online counseling case studies. There is little literature written about how these online psychotherapy services are being used in professional psychotherapy businesses. Hanley and Reynolds (2009) indicate that there is a growing demand for these online psychotherapy services and according to them it is a burgeoning profession (p.5).

Problem Area

Technology progresses rapidly and the rate of technological change is exponential, not linear (Kurzweil, 2001). According to the Pew Research Center, the number of people who have

computers in their home has risen consistently over the years (Rainie, 2010). The survey

interviewed 2,258 adults, age 18 or over regarding their internet, broadband and cell phone usage

(Rainie, 2010). There are more people accessing the internet through broadband connections at

home, and there is an increasing number of wireless home networking over the last ten years

(Rainie, 2010). Furthermore, according to the same study, statistics on cell phone utilization

indicate that 83% of those surveyed own smartphones, and 35% of the smartphone owners have

data plans that allow them to access the internet (Rainie, 2010).

Technological advances eventually influence social science domains, including the field

of psychology (Castelnuovo, Gaggioli, Mantovani, & Riva, 2003). Web-based tools exist that

can be utilized by the fields of psychology or psychiatry, but professionals are slow to adapt to

technology and to begin using tools (Murphy, 2003). Some professionals do not believe that

rapid technological growth will result in using more web-based tools for treatment purposes in

their offices (Murphy, 2003). Although there is some early adoption of technology for

therapeutic purposes, the vast majority of psychotherapy is done using conventional face-to-face

therapy (Mallen, Vogel, Rochlen, & Day, 2005).

Even though technology and internet access is expanding for most of the population,

health care businesses are slow to move away from conventional therapy. Few health care plans

are offering an online option for therapeutic counseling that would be covered by insurance.

Horgan (2007) reports that while many health plans offer informational and educational

resources, self-assessment tools, and referral resources for mental disorders, only 2% of the

health plans offer online counseling services (as cited in "Few health", 2007). Castelnuovo et al.

(2003) state that there are few clinicians using online psychotherapy and in order for the field to

develop a widespread change in health care organizations is necessary (p.380).

Hanley and Reynolds (2009) and Young (2005) mention that clients are interested in using the internet for therapeutic purposes. Early studies involving the use of the Internet in providing psychotherapeutic treatment indicate that it appears to be as effective as conventional treatment (Barak, Hen, Boniel-Nissim, & Shapira, 2008; Cook & Doyle, 2002). Three main reasons that patients express a desire for online treatment are:

(a) Geography: Patients cannot be reached easily for face-to-face therapy because of geography. For example, patients who live in rural areas where they do not have access to a therapist locally find using online counseling is more practical (Taylor & Luce, 2003). Additionally, geographical difficulties may also become a factor for persons with disabilities who cannot travel easily (Lange, Rietdijk, Hudcovicova, van de Ven, Schrieken, & Emmelkamp, 2003).

(b) Privacy: Patients desire to have a therapy session that is anonymous. Patients receiving treatment often desire to be anonymous; they may be either shy or fear being stigmatized by getting therapy (Lange et al., 2003; Rochlen et al., 2004; Young, 2005).

 (c) Convenience: Patients prefer the convenience that online psychotherapy offers (Lange et al., 2003; Taylor & Luce, 2003). Online psychotherapy allows the patient to avoid the commute to see the therapist (Rochlen et al., 2004). Patients with busy work schedules and those with children who need to find child care enjoy the convenience and flexibility that online counseling offers (Rochlen et al., 2004; Young, 2005). Time limitations and conflicts in scheduling due to work obligations can become issues with conventional therapy, whereas, online counseling lacks the restrictive office hours of conventional therapy (Rochlen et al., 2004; Taylor & Luce, 2003; Young, 2005). Many busy professionals are required to travel frequently

for business purposes. The convenience of being able to schedule an appointment with a

therapist during business travel is possible with online psychotherapy.

In academic institutions researchers focus their studies primarily on assessing the clinical

effectiveness and ethical ramifications of using such web-based tools in psychotherapy

(Childress, 2000; Hsiung, 2001; Mallen, Vogel, & Rochlen, 2005). However, Taylor and Luce

(2003) believe that researchers still fail to keep up with technology and the studies needed to

assess the effectiveness of online psychotherapy. Taylor and Luce are researchers in the

department of psychiatry at Stanford University and they state that, "unfortunately, the scientific

study of these programs has seriously lagged behind their purported potential, and these

interventions pose important ethical and professional questions" (Taylor & Luce, 2003, p.18).

Skinner and Zack (2004) have looked into the feasibility of establishing an online

counseling business and discuss the history of online psychotherapy used by professional

therapists. In 2003, Riva and Galimberti outlined a large array of web-based tools being used

including rare tools like program sharing, and remote desktop. However, technology advances

since 2003 means smartphones which are common today were not mentioned. Today a greater

number of the people who own a smartphone or PDA use it to send and receive email over the

Internet making it possible to have email therapy through those devices (Rainie, 2010, p. 13).

Researchers have investigated the use of online psychotherapy in the private sector, and

whether there is acceptance in the healthcare community for online psychotherapy ("Few

health", 2007). There are indicators that health care agencies are interested in online

psychotherapy as a cost effective way to deliver psychotherapeutic services (Nowak, 2008). King

et al. (2009) predict that physician based offices can use online programs, along with drug

medication, to combat substance abuse (p.336). Private practice organizations such as the e-

Getgoing group are leading the way (King et al., 2009). The treatment program provides online

group therapy sessions for the treatment of addiction (King et al., 2009). According to the

website, the e-Getgoing organization (http://www.egetgoing.com/) has its roots in CRC Health

Corporation, a group of residential and outpatient substance abuse treatment programs.

Significance

In June 2005, researchers conducted a study of online counseling, and a literature review

of the framework of online psychotherapy but technological changes and the invention of new

technology tools make the literature outdated (Mallen et al., 2005). For example, during the

1990s up until the late 2000s the main web-based tools used for direct online counseling sessions

were email exchange and chat software tools (Stofle, 2001). Therapists were still conducting

therapy through use of the telephone system during the late 2000s even though web-cameras and

video software were readily available (Fukkink & Hermanns, 2009).

Previous research of the web-based tools being used in online psychotherapy points to the

need for professional therapists to be aware of technical problems related to specific web-based

tools used in online psychotherapy (as cited in Castelnuovo et al., 2003; King et al., 2009). In

general, clients accept online psychotherapy as a legitimate means of providing therapy (Mallen

et al., 2005) and the majority of clients are satisfied with their online psychotherapy service

(King et al., 2009). But therapists need to have more technical proficiency in order to implement

online psychotherapy (as cited in Castelnuovo et al., 2003). They need to be able to deliver

online psychotherapy services and to scientifically evaluate services (Mallen & Vogel, 2005,

p.772).

Manhal-Baugus (2009) believes that research into web-based technology tools used for

online psychotherapy can help professional therapists make better choices about the advantages

and disadvantages of providing online psychotherapy in their offices (p.561). Skinner and Zack (2004) claim that, "a single licensed professional who gathers clients slowly by word of mouth has an opportunity to be a maverick and use whatever methods (technological or therapeutic) that work best for him or her" (p.442).

Audience

The primary audiences for this study are the professional therapist, and businessmen or women who work with the professional therapy community. The intention of this study is to develop an inventory of web-based tools being used in psychotherapy, as a way to inform people who are interested in starting online psychotherapy service businesses, or for companies who are already providing online psychotherapy services. Alternatively, the study can be utilized by state agencies that are involved in psychotherapy regulations, and non-profits that wish to implement more technology tools into their current therapy practices.

Studies indicate that if internet-based psychotherapy is made available, clients will enroll in the online services (Nijland, Van Germent-Pinjen, Boer, Steehouder, & Sedel, 2008). Creating an inventory of web-based tools that currently exist in psychotherapy is essential for delivering the online services that a client desires. Professional therapists are hesitant in applying online psychotherapy in their offices, and fewer than 2% utilize any online psychotherapy tools besides the telephone (Murphy, 2003, p. 15).

Outcome

The outcome of the study is a descriptive inventory that describes selected web-based technology tools being used in psychotherapeutic services, and how they are being applied. The descriptive inventory is intended to provide online psychotherapy businesses and other organizations with a resource that can be consulted when making business decisions about the

selection of technology in providing their psychotherapy services. This inventory is organized around three major categories that can be found within the Diagnostic and Statistical Manual of Mental Health Disorders (DSM-IV). The DSM-IV manual is the book that professional therapists use for the purpose of diagnosing mental disorder in the United States (Diagnostic and Statistical Manual of Mental Health Disorders [DSM-IV], 2010). The disorders associated with these three categories are mental health issues commonly diagnosed in professional therapy offices (National Institute of Mental Health [NIMH], 2010).

Professional therapists connected with academic institutions find the literature review useful for conducting further inquiries involving online psychotherapy. Current literature detailing web-based tools focuses on defining the types of online psychotherapy interventions, including web-based self help and educational content (Barak et al., 2009). One of the latest studies assessing the effectiveness of online psychotherapy, conducted in 2008, details the communication modalities of the online psychotherapy studies but gives no guidance to professional therapists about how to implement the tools (Barak et al., 2008).This study enables professional therapists and researchers to examine a selected range of web-based tools, and the related mental health issues being treated.

Research Questions

According to Procter and Taylor (2010) it is essential that a literature review be organized around, or be directly related to a research question. The questions that this literature review is designed to address are:

Main Question

- What web-based tools are used to support online psychotherapy for both individuals and groups?

Sub-Question

- How are the web-based tools being applied in the field of psychotherapy (what forms of mental health disorders are being treated, as these are defined in the DSM-IV categories).

Delimitations

Topic. This study inventories web-based tools that are used in online psychotherapeutic services, utilized by either individuals, or groups of people who are seeking therapy treatment via the internet. For the convenience of the professional therapist, the literature is presented based on three of the major DSM-IV categories.

Focus. The scope of the tool identification involves those used to support group therapy, individual therapy, and web-based programs designed to provide training to clients with the use of technology. Selected technologies are limited to Computer-based Training (CBT), Computer-Mediated Communication (CMC), Computer Assisted-Instruction (CAI) tools and any other web-based tools used on the internet. Any web-based tools discussed are limited to internet-based software programs that are used specifically to train clients as part of their therapy treatment. Internet-based software programs for the purpose of diagnostics of mental health assessment are not discussed.

Time Frame. A few researchers have tested the use of web-based tools in psychotherapy since the early 1990s but the bulk of the technological tool progression used in the field of psychology evolved at the turn of the century (Chan, 1990; Hamilton, 1999). In order to collect a large enough sample of literature on the topic the literature collected was published between the years of 2000 and 2010. Some of the literature which refers to the historical progression of the technology tools, and which defines key terms, derives from the 1990s.

Audience. This literature review is targeted at those persons associated in the professional counseling field who have specifically received accreditation through the American Psychological Association (APA, 2010) or the American Psychiatric Association (APA, 2010). Members of government agencies who regulate psychotherapy services and members of non-profits who provide counseling may also find the literature review useful. The review is intended to be used by institutional entities, academic entities, and private practice businesses within the United States. The American Psychiatric Association publication of the DSM-IV is used for presenting the literature review findings to professional therapists (NIMH, 2010).

Selection Criteria. The majority of the literature selected for this literature review derives from peer-reviewed articles from selected academic journals and are written by authors associated with academic institutions (University of North Carolina [UNC], 2010). The scope of the location of the academic publications is wide with many of the article studies originating from academic scholars throughout the world (Barak et al., 2008; Chester & Glass, 2006; Riva & Galimberti, 2003; Schielein, Klein, Hubner-Liebermann, & Spiessl, 2009). The literature sources are selected based on their article abstracts containing keywords and having content that is closely related to the topic. The remaining literature used to support the literature review comes from government and academic websites, non-profit research centers, magazines, and books. Selected literature is limited to studies involving individual, and or group therapies, and web-based programs or counseling.

Exclusions. The scope of the selected literature used in both the Annotated Bibliography and the general Reference section excludes resources that focus on the topics of:

- The use of web-based tools for purposes of training teachers, or counselors how to implement internet therapy.

- The names or types of therapies that professionals or academics are using (i.e. Cognitive Behavioral Therapy, Rational Emotive Behavior Therapy, Psychoanalysis).

- Online support websites that disperse primarily educational, self-help assessment, and that promote informational materials as a means of treatment.

- Details about the effectiveness of any of the therapy treatments implemented, or the effectiveness of the utilization of any web-based tools that are researched.

- Ethical implications of online psychotherapy, or whether professionals should be doing online psychotherapy. Ethical questions about who is qualified to practice online psychotherapy, or whether there should be required training and credentials.

- Psychopathological disorders that derived from internet usage (i.e. gaming addiction, online gambling, internet porn addiction).

- Web-based interventions that are health related (tele-health) such as rehabilitation.

- Mental health disorders that do not fall into the DSM-IV categories of anxiety disorders, mood disorders or personality disorders.

The study does not include an investigation of any studies that involve the negative impact of the internet in individuals or groups. There is no investigation into the disorders associated with the use of the internet. Although academics are investigating behavioral problems related to new psychological disorders attributed to the internet, there is no exploratory research of internet related addictions such as online gambling addiction, online pornography addiction, or internet video-gaming addiction (Goodman, 1993; Matthews, Farnsworth, Griffiths, 2009; Ng & Wiemer-Hastings, 2005).

Data Analysis Plan Preview

Creswell (2005) states, "the process of data analysis involves making sense out of text and image data" (p.3682). Data analysis for this literature review is conducted using the qualitative research approach of conceptual analysis. The intent of qualitative research is to deliberately select documents that are best suited to help the researcher understand the research problem (Creswell, 2005, p.3637). According to Busch et al. (2005) the conceptual analysis approach is performed in order to verify the presence of specific words and concepts within documents. The conceptual analysis in this study is focused on exploring two main concepts: (a) identifying the web-based tools that are used to develop an inventory of web-based psychotherapy tools, and (b) revealing which mental health issues are being treated with the web-based tools. The detailed coding process is guided by a series of eight steps, defined by Busch et al. (2005). The eight step coding process is outlined in the Research Parameters section of this study.

Writing Plan Preview

The writing plan for this study is based on a rhetorical *thematic* writing approach. A thematic pattern is one in which data is organized around a theme or topic (UNC, 2010). Review of the results of the coding process takes place following the data analysis stage, and data is organized in ways that align with the main research questions and the sub-topic questions. First the data regarding the web-based tools is organized categorically according to the DSM-IV categories, and then it is grouped chronologically. The writing plan examines relevant references that focus on (a) web-based tools used for online psychotherapy and (b) the types of mental health disorders that are being treated with web-based tools. The goal is to construct a useful inventory of web-based tools that can be used as a reference by professional therapists interested in providing online psychotherapy.

Definitions

When a new field like *cyberpsychology* emerges, researchers find themselves in

unfamiliar territory. New definitions and models become necessary for the successful

development of the new field. Defining online psychotherapy terms has become difficult due to

the lack of consistency and clarity (Barak et al., 2009). Several variations of terms that seem

similar but have slight differences in their meaning appear throughout the literature. The majority

of the terms used in this study derive from psychiatry, psychology, education, information

systems, and counseling departments.

Anxiety Disorder- A pervasive and unpleasant feeling of tension, dread, apprehension, and

impeding disaster (Corsini, 1999). Some disorders include; panic disorder, post-traumatic stress

(PSTD), generalized anxiety, and phobia disorders (NIMH, 2010).

APA- American Psychiatric Association is the governing body that licenses professional

psychiatrists. The American Psychological Association is also known as the APA and they are

responsible for licensing therapists with degrees that are not medical. The American Psychiatric

Association is responsible for the publication of the DSM-IV manual that is used by

professionals in clinical assessment, but both organizations use it for making clinical assessments

for their clients (APA, 2010).

Computer-assisted instruction (CAI) – A type of education in which the student learns by

executing special training programs on a computer, also called CBT (Webopedia, 2010).

Computer-based Training (CBT) – A type of education in which the student learns by

executing special training programs on a computer (Webopedia, 2010).

Computer-mediated Communication (CMC)- Human communication via computers and

includes many different forms of synchronous, asynchronous or real-time interaction that

humans have with each other using computers as tools to exchange text, images, audio and video. CMC includes e-mail, network communication, instant messaging, text messaging, hypertext, distance learning, Internet forums, USENET newsgroups, bulletin boards, online shopping, distribution lists and videoconferencing (Wikipedia, 2010).

Cyberspace- According to Webster's Dictionary cyberspace is defined as, "a computer network consisting of a worldwide network of computer networks that use the TCP/IP network protocols to facilitate data transmission and exchange" (Merriam-Webster, 2010).

Cyberpsychology – The word is composed of the two words *cyberspace* and *psychology.* A simple definition is that cyberpsychology is the user's behavior in cyberspace (Norman, 2008).

Cybertherapy-computer mediated psychotherapy (Suler, 2000).

DSM-IV-IV- Diagnostic and Statistical Manual of Mental Disorders, fourth edition is the APA publication that is the manual for diagnosing mental health disorders in the United States (American Psychiatric Association [DSM-IV], 1994).

E-therapy- Psychotherapy in Cyberspace (Suler, 2000, p.2).

Interapy- Internet mediated therapy, a type of therapy where the therapist determines and provides feedback over the internet (Lange et al., 2003, p.901).

Literature Review- A written document which develops a case to establish a thesis. This case is based on a comprehensive understanding of the current topic of knowledge. A literature review synthesizes current knowledge pertaining to the research question. This synthesis is the foundation which, through the use of logical argument, allows the researcher to build a convincing thesis case (Machi & McEnvoy, 2009, p.156).

Mood Disorder- A pathological condition in which a persons mood is inappropriate to the situation, such as smiling or laughing when the person should be sad, or becoming violent with little provocation; may involve sudden mood changes with no apparent cause (Corsini, 1999).

Online psychotherapy- Any type of professional therapeutic interaction that makes use of the Internet to connect qualified mental health professionals and their clients (Rochlen et al., 2004).

Personality Disorder- A group of behavioral anomalies characterized by pervasive, maladaptive patterns of perceiving, relating to, and thinking about the environment, others, and the self, when these patterns interfere with long-term functioning of the individual and is not limited to isolated episodes. Such patterns of behavior are distinguished from psychotic and neurotic symptoms (Corsini, 1999). Common disorders include; anti-social, avoidant, borderline personality (BPD) (NIMH, 2010).

Psychotherapy- Psychological treatment techniques designed to help persons with emotional or behavioral disturbances to adjust to situations that require social interfacing with other members of the community (Corsini, 1999).

Psychology- A branch of science dealing with behaviors, acts, or mental processes, as well as the mind, self, or person who behaves or acts or who has the mental processes (Corsini, 1999).

Teletherapy- The process of administering psychotherapy through the use of a medium of video, or satellite (Hanley & Reynolds, 2009), also called *telehealth* or *telepsychiatry* (Rochlen et al., 2004).

Therapy- The treatment of disease or disorders, as by some remedial, rehabilitating, or curative process (Dictionary.com, 2010).

Virtual Reality (VR) – A reality that has the effect of actual reality but not its authentic form, a kind of simulation or substitute, but one with potency and validity (Suler, 1999).

Web-based Intervention- A primarily self-guided intervention program that is executed by

means of a prescriptive online program operated through a website and used by consumers

seeking health and mental health related assistance (Barak et al., 2009).

Research Parameters

The research parameters explain the methods used to conduct the literature review. There are several components within the research parameter section including: the search report, keywords used, the search methods used, a search analysis summary, the documentation methods, data analysis methods, and the writing plan. Specific focus is on collection of literature resources which describe tools used by professional psychiatrists, clinical psychologists and relevant units within academic institutions.

Search strategy. The initial search of the literature is done by gathering information using keywords pertaining to the web-based tools that are being used for psychotherapy. The first method of retrieving information involves accessing several university library catalogs. This is accomplished in the beginning by doing preliminary research to discover what databases exist for the purpose of researching the chosen topic. The literature that is gathered consists of research in the form of peer-reviewed journal articles, and psychological studies. The primary goal is to gather literature that is based on peer-reviewed articles, and empirical studies from the academic researchers who are pioneers in the area of cyberpsychology (Riva, & Galimberti, 2003).

Key words. The majority of the key words derive from commonly used terms and words associated with the new branch of psychology called *Cyberpscyhology* (Norman, 2008). There are two outlier terms that come from the field of computer science. It is necessary to create one composite key word using *technology* and *psychotherapy* together to yield more accurate results when using search engines. The following key words are used:

- online psychotherapy
- web-based therapy

- internet therapy

- etherapy

- technology and psychotherapy

- cybertherapy

- cyberpsychology

- internet treatment

Search results. The primary method of conducting searches is to focus on the well-known databases that are used in the medical sciences, and social sciences for the purpose of finding material related to the topic. The search is conducted using library resources from three Oregon state universities; Portland State University, University of Oregon, and Oregon Health Sciences University (OHSU). Databases that yield the most relevant materials are: PsycINFO, Ovid, EBSCOhost, PubMed Central and Academic Search Complete. Since the field of Cyberpsychology is a relatively new area, the majority of the studies that were found have been done within the last fifteen years. The secondary method of researching is to browse thoroughly through the materials related to any professional organizations that are associated with counseling, psychology, psychotherapy, psychiatry, or cyberpsychology. Organizations like the American Counseling Association (ACA, 2010), American Psychological Association (APA, 2010), and the National Institutes of Health (NIH, 2010) have websites and specialized databases that contain studies that will be very constructive.

Preliminary search indicates that some of the web-based tools being used for online psychotherapy are: (a) video-conferencing (Bouchard et al., 2000; Hill et al., 2004; Murphy, McFadden, Mitchell, 2008), (b) websites (Larimer & Cronce, 2007), (c) software installed on

computers (Chan, 1990), (d) instant messaging (Barak & Bloch, 2006; Hagland, 2006), and

blogging (Ko & Kuo, 2009). The tools include projects piloted throughout national universities

and colleges (Larimer & Cronce, 2007; Murphy, MacFadden, & Mitchell, 2008) and community

health centers (Neil, Batterham, Christensen, Bennett, & Griffiths, 2009).

Documentation Approach

Having a sound documentation approach to writing a literature review ensures that data

sources that are collected are not duplicated in the search process and aids in the acquisition of

the best literature resources for the literature review (Callow et al., 2005, p.1). Documentation

for this study is processed using a method of gathering, scanning, and coding the literature

(Busch et al., 2005). There are two methods by which the sources are collected for the document.

The first method uses online citation management software to collect and organize the

documents that will be used in the literature review. The reference software that is being used for

gathering the documents into a system is called RefWorks; it is one of the reference software

programs used in academic libraries for reference collection for writing papers (Kelly &

Marsalis, 2004). Some of the benefits of RefWorks are the support for multiple databases, ability

to have multiple folders, to share your bibliography with others, and a web-based exportation of

citations directly into your account (Kelly & Marsalis, 2004). Literature can easily be sorted and

organized within Reworks' by any number of characteristics like the authors name, publication

date, journal name, article title, etc. The online version of the software enables article citations to

be directly imported online making the process of gathering of literature speedy.

The second documentation approach is the manual process of recording each piece of

literature within an MS Excel spreadsheet based on several characteristics. The spreadsheet

captures the following characteristics of the literature in columns: an index source number, keywords found in title, keywords found in abstract, publications year, publication/journal name, location/origin, technology tools used, disorders treated.

The scanning process consists of evaluating each literature piece, establishing whether it is a credible source based on the criteria within the Research Parameters, and inputting it into both MS Excel and RefWorks. After all literature sources that fit the evaluation criteria are gathered and scanned then they are coded on index cards. The information recorded on the index cards consists of:

1. priority value- how relevant is the article based on a scale of low-medium-high relevance to the topic.

2. number of research questions instances that appear- there are 2 Research Questions

3. main themes or content that appear in the literature- paragraphs containing information related to answering the research questions are noted on the card.

Evaluation Criteria

Each resource being used in the literature review needs to be evaluated for specific critieria to ensure that the best possible literature pieces are collected for the literature review (UNC, 2010). All literature that is selected as part of the Annotated Bibliography is published during the 2000 decade. The majority of the literature selected for the Reference section is also published within the 2000s, with exception to a few minor references that are used to show historical relevance of technology tools. Criteria include the relavance of the resource, the audience, the authority of the author(s), and the objective of the resource need to be analyzed (UNC, 2010). The following is the list of evaluation criteria:

- Keyword Criteria- The resources contain one or more of the words, or phrases listed in the title or abstract of the text.

- Objectivity/Applicability- Resources are selected based on a scale of relavance to the topic of web-based tools used in psychotherapy. Resources that focus more on the clinical effectiveness and less on the technology tools are considered weaker resources.

- Peer –Reviewed- Each resource within the Annotated Bibliography is published by an authoritative author(s) who is associated with an academic institution, or government entity. Furthermore, the resources are all peer-reviewed sources.

- Publishing Credibility- Annotated Bibliography resources have been published for academic universities exclusively, and are not published by the authors themselves.

- Authors- Author(s) of the published works are deemed to be trustworthy sources, dependant on connections to an academic institution, and professional credentials.

- Source Type- Each reference located within the annotated bibliography derives from a credible academic journal or e-journal. Supporting references come from a variety of sources including but not limited to: journals, books, guides, magazines, and websites.

Data Analysis Plan

Conceptual analysis strategy. The data analysis for this literature review is conducted using a type of content analysis called *conceptual analysis* (Busch et al., 2005). Conceptual analysis is a type of content analysis that investigates the existence or frequency of concepts, looking at how words and phrases are within texts (Busch et al., 2005). Concepts and supporting ideas that relate to the research questions of what web-based tools are being used in psychotherapy, and what psychological disorders are being treated with web-based tools are

identified from a variety of literature. The literature that forms the data set for conceptual analysis is presented in the Annotated Bibliography section of this paper. Data that is gathered is first organized categorically, and then grouped chronologically.

   Coding procedures. According to Busch et al. (2005) there are eight steps needed to complete the coding procedure for a conceptual analysis. Each step requires the researcher to make a decision related to process.

1. Level of analysis - The level of analysis is words and phrases. The main coding phrases are *online counseling, internet counseling, online psychotherapy* and *internet therapy*. The following terms which describe psychological counseling are also used; *Interapy, teletherapy, and Etherapy*.

2. Concepts for coding - Selected literature is coded based on two larger pre-determined concepts: (a) *psychotherapy online*; and (b) *web-technologies used in psychotherapy*.

3. Existence or frequency of concept - The selected literature is coded by noting the existence of a key phrase and not by the frequency of the key phrase in the text.

4. Level of Generalization- Key phrases such as are *online counseling, internet counseling, online psychotherapy* and *internet therapy* will be coded exactly as they appeared. Similarly, the keywords *Interapy, Etherapy* are coded exactly are they appear. However, *teletherapy* is coded differently because it is limited to specific technology tools such as a television, satellite, or video-displayed therapy.

5. Translation Rules- Translation rules are essential to ensure that there is coherence when doing categorization of keywords. The use of the keyword phrases; online counseling, online psychotherapy, internet counseling, and internet therapy are all translated similarly since there is no significant different in the meaning of such general terms. Furthermore, keywords with

variations in spelling due to cultural differences are translated the same. For example, the words *counselling* and *counseling* (Anthony, 2000; Hanley & Reynolds, 2009).

6. Irrelevant Information- Any irrelevant information will be disregarded. Irrelevant information does not need to be considered and has no impact if removed from the coding process.

7. Coding the texts- The coding process is applied with the use of both manual coding, and citation software. Citation software is used to input texts and is used to search literature using a number of literature characteristics. Coding is conducted by writing down key terms and phrases listed in coding steps 1 and 2 and inserting them into an MS Excel spreadsheet. Further coding is conducted by creating the index cards that contain information about the priority of the source, are all looked at to analyze the common categories that exist.

8. Analyze Results- Data is compiled in MS Excel; it is scanned and analyzed for data relevant to the two research questions. Unused material is set aside and left for possible future examination and coding. The resulting ideas and statements are organized and presented in the Review of the Literature section of this study. See the Writing Plan below, for details.

Writing Plan

Online psychotherapy is relatively new in the field of psychology, but the use of technology tools in the field of psychology has been around for decades (Hanley & Reynolds, 2009). However, there is no way for professional therapists to make business decisions about web-based tools because there is no updated inventory of web-based tools that exist. This writing plan is designed to inventory those web-based tools so professional therapists can make business decisions about their usage with various treatments.

Data includes the past and current use of web-based tools and how they are used by professional therapists and academic researchers. Being able to see what web-based tools are being used during a selected period of time enables therapists to determine which tools are being adapted online. Furthermore, it is possible to see the expansion of online psychotherapy over the last decade as a motive for providing professional therapy services (Young, 2005).

Since an inventory of web-based tools is useless for a professional therapist if it is not organized well, the writing plan organizes the data by selected mental health disorder categories. Selected mental health categories constructed for the writing plan derive from the American Psychological Associations (APA, 2010) manual of mental health disorders known as the DSM-IV. According to the National Institute of Health (NIMH), mental disorders in the United States are diagnosed based on the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) (NIMH, 2010). Professional therapists refer to the DSM-IV when assessing the mental health of a client; therapists are well versed with the main categories outlined within the DSM-IV. There are only three DSM-IV categories that are used in this study and they comprise the bulk of mental health issues that are accounted for in the US population. The three categories of disorders are arranged hierarchically, based on the highest percentage of people in the population that suffer that disorder. These three categories derived from the latest statistical counts of the NIMH are a) anxiety disorders (18.1%) b) mood disorders (9.5%) c) personality disorders (9.1%). They also comprise the bulk of the disorders treated in online psychotherapy (NIMH, 2010).

Annotated Bibliography

The following section presents the key references used to build this study. An annotated bibliography is an organized list of the resources that contain a brief notation or comment section (University of Wisconsin, at Madison [UWM], 2010). There are 20 resources that are used to compose this annotated bibliography, and each one is selected for its high relevance to the topic purpose- *web-based tools used in psychotherapeutic services*. Notations describe the content and the relevance of the reference for the purpose of the literature review (UWM, 2010).

❖ Barak, A., & Bloch, N. (2006). Factors related to perceived helpfulness in supporting highly distressed individuals through an online support chat. *CyberPsychology & Behavior*, 9(1), 60-68. Retrieved from http://construct.haifa.ac.il/~azy/azy.htm

Abstract. The purpose of the study was to examine the contribution made by dimensions of session-impact factors (depth and smoothness), end-of-session factors of client's mood (positivity and emotional arousal), and several textual variables (use of positive and negative emotional words; helper's and client's writing lengths) to perceived helpfulness of emotional support conversations carried on by trained, paraprofessional helpers through an Internet chat with highly distressed individuals. Two studies were conducted at an Israeli, exclusively online emotional support service for suicidal and highly distressed people who have undergone various negative experiences (SAHAR). Study 1 compared 40 chat conversations deliberately indicated by clients as having been helpful at the termination stage of session with 40 other conversations, using expert judgments of session-impact factors, as well as objective word counts for textual variables. Study 2 examined correlations between helpers' evaluation of the sessions' helpfulness to clients in 60 (other) chat support conversations and session-impact factors and textual variables.

The findings of Study 1 showed that all four impact factors significantly differentiated between helpful and other conversations, while textual variables did not. In Study 2, the results showed that all four session-impact factors positively correlated with session helpfulness, yielding multiple R = 0.54, as well as the length of helper's and client's writing. The implications of these studies are similar to offline counseling sessions: deep, smooth conversations that yield positive responses and arouse clients' emotions in online support are more helpful than shallow, bumping conversations that leave clients emotionally indifferent. Longer writing, by both helpers and clients, seems to be an important factor, as well.

Comments. This article focuses on two studies that take a look at the online treatment for depression and suicide with the use of online discussion. The paper describes how a therapist can use email, and instant messaging, and other text-based therapies for counseling. One interesting aspect from this study is that one of the programs was an exclusively online program; most studies provide only a combination of online and onsite facility assisted program. The material is a good resource for supporting the *Research Problems* of the literature review. There is information that can be used for both the *Main Research Questions* and the *Sub-topic Questions*. Azy Barak is a leading researcher in the field of online psychotherapy. He often collaborates with other international university counseling departments to write about etherapy. He holds an academic position at the University of Haifa, Mount Carmel, Israel.

❖ Barak, A., Hen, L., Boniel-Nissim, M., & Shapira, N. (2008). A comprehensive review and a

meta-analysis of the effectiveness of Internet-based psychotherapeutic interventions.

Abstract. Internet-based psychotherapeutic interventions have been used for more than a

decade, but no comprehensive review and no extensive meta-analysis of their

effectiveness have been conducted. We have collected all of the empirical articles

published up to March 2006 (n ¼ 64) that examine the effectiveness of online

psychotherapy of different forms and performed a meta-analysis of all the studies

reported in them (n ¼ 92). These studies involved a total of 9,764 clients who were

treated through various Internet-based psychological interventions for a variety of

problems, whose effectiveness was assessed by different types of measures. The overall

mean weighted effect size was found to be 0.53 (medium effect), which is quite similar to

the average effect size of traditional, face to-face therapy. Next, we examined interacting

effects of various possible relevant moderators of the effects of online psychotherapy,

including type of therapy (self-help web-based therapy versus online communication-

based etherapy), type of outcome measure, time of measurement of outcome (post-

therapy or follow-up), type of problem treated, therapeutic approach, and communication

modality, among others. A comparison between face-to-face and Internet intervention as

reported on in 14 of the studies revealed no differences in effectiveness. The findings of

this meta-analysis, and review of additional Internet therapy studies not included in the

meta-analysis, provide strong support for the adoption of online psychological

interventions as a legitimate therapeutic activity and suggest several insights in regard to

its application. Limitations of the findings and recommendations concerning Internet-based therapy and future research are discussed.

Comments. In this study Barak, Boniel-Nissim, & Shapiro look at the use of online therapy programs as a legitimate professional service that can be provided by of the number of studies they reviewed is a relatively large sample. The article can be used to show what outcomes can be expected from researching online technology tools and therefore is useful for the *Outcomes* area of the paper. Azy Barak et al. are researchers at the University of Haifa, Mount Carmel, Haifa, Israel.

❖ Barak, A., Klein, B., & Proudfoot, J. G. (2009). Defining Internet-supported therapeutic interventions. *Annals of Behavioral Medicine*, *38*(1), 4-17. doi:10.1007/s12160-009-9130-7

Abstract. The field of Internet-supported therapeutic interventions has suffered from a lack of clarity and consistency. The absence of professional leadership and of accepted governing approaches, terminology, professional standards, and methodologies has caused this field to be diffused and unstructured. Numerous terms have been used to label and describe the activities conducted over the Internet for mental and physical health purposes: web-based therapy, e-therapy, cybertherapy, eHealth, e-Interventions, computer-mediated interventions, and online psychotherapy (or counseling), among others. Following a comprehensive review, we conceptualized Internet-supported interventions, using four categories based on prime practice approaches: web-based interventions, online counseling and therapy, Internet-operated therapeutic software, and other online activities (e.g., as supplements to face-to-face therapy). We provide a working definition and detailed description of each category, accompanied by numerous

examples. These categories may now serve as guiding definitions and related

terminologies for further research and development in this emerging field.

Comments. The focus of this article is on the topic of defining online psychotherapy.

This piece of literature is the best source for what online technology tools currently have

been inventoried. It is important for the formulation of the purpose, outcomes, and for

supporting the significance of the literature review. Azy Barak is a researcher from the

University of Haifa, Israel and is considered to be one of the fathers of online

psychotherapy.

❖ Bouchard, S., Payuer R., Rivard, V., Allard, M., Paquin B., Renaud P., & Goyer L. (2000).

Cognitive behavior therapy for panic disorder with agoraphobia in

videoconference: Preliminary results. *CyberPsychology & Behavior, 3*(6), 999-1007.

http://www.liebertonline.com/doi/abs/10.1089%2F109493100452264.

Abstract. Many studies have shown the feasibility of psychiatric consultation in

telehealth, and some have addressed the effectiveness of telepsychotherapy. However,

outcome studies on telepsychiatry essentially amount to a few case studies, none of which

have used an empirically validated psychosocial treatment to treat a specific mental

disorder. This article presents the preliminary results of an outcome study on the

effectiveness of telepsychotherapy for panic disorder with agoraphobia. Participants

received 12 sessions of cognitive-behavior therapy, which is an empirically validated

treatment for panic disorder with agoraphobia. The treatment was delivered via

video conference by trained therapists according to a standardized treatment manual.

The remote site was located at 130 km north of the local site and both were linked

by six ISDN lines. Telepsychotherapy demonstrated statistically and clinically significant

improvement on measures of target symptoms (frequency of panic attacks, panic

apprehension, severity of panic disorder, perceived self-efficacy) and measures of global

functioning (trait anxiety, general improvement). Of interest was the fact that a very

good therapeutic alliance was built after only the first telepsychotherapy session. Factors

that may reduce the effectiveness of telepsychotherapy are discussed.

Comments. The journal article is based on the outcome studies of online psychotherapy,

and the effectiveness compared to onsite therapy. The published date of this resource

makes it interesting because it shows that researchers have been doing studies using

video-conferencing software as far back as 2000.This resource is useful in presenting

tools like video-conferencing during their earliest stages. It supports the literature reviews

Problem area under the *Introduction* section. It is a useful resource for developing a

chronological pattern of technology tool use. Bouchard et al. are researchers associated

with the Department of Psychology at the University of Quebec-Montreal, Montreal,

Canada.

❖ Capner, M. (2000). Videoconferencing in the provision of psychological services at a

distance. *Journal of Telemedicine and Telecare*, *6*(6), 311-319.

doi:10.1258/1357633001935969.

Abstract. This paper reviews the literature on the provision of psychological services

using videoconferencing. First, mental health assessments are considered in terms of both

the initial interview and the use of scales for rating symptoms of mental state dysfunction,

including psychosis, depression and anxiety. Ways to increase the reliability of initial

assessment data collected by videoconference are provided, and the consumer's

experience of receiving this service by videoconference is also considered. Research

comparing the administration of psychometric tests in person and by videoconference is

then reviewed, as is the client's experience of receiving this service by videoconference.

Psychological interventions provided for individuals, families and groups by

videoconference are also considered. Positive and negative experiences relate to issues of

empathy, working alliance, a sense of control and a sense of presence. The levels of

comfort and satisfaction expressed by both counselors and clients with the use of the

medium are discussed. Recommendations for how best to use videoconferencing for

psychological interventions are offered and contraindications are reviewed.

Videoconferencing for the purposes of supervision is also briefly covered. The legal

issues associated with the use of videoconferencing to provide psychological services

include consent, reimbursement, professional licensing and liability. It seems that

videoconferencing is a new and potentially beneficial means of bringing psychological

services to isolated communities. However, it may be necessary to explore the technique

cautiously. There is a dearth of evidence regarding the reliability of psychological

services provided using videoconferencing and consequently there is vast opportunity for

further research.

Comments. Maxine Capner is a psychologist in Australia who does research at the

School of Psychology at James Cook University, Queensland, Australia. Her article gives

the professional therapist directions on implementing video-conferencing as a web-based

tool. The article serves a purpose in supporting the *Introduction* of the literature review.

❖ Castelnuovo, G., Gaggioli, A., Mantovani, F., & Riva, G. (2003). From psychotherapy to E

therapy: The integration of traditional techniques and new communication tools in

clinical settings. *CyberPsychology & Behavior*, *6*(4), 375-382. doi:

10.1089/109493103322278754

Abstract. Technology is starting to influence psychological fields. In particular, computer-mediated communication (CMC) is providing new tools that can be fruitfully applied in psychotherapy. These new technologies do not substitute for traditional techniques and approaches but they could be integrated in the clinical process, enhancing or making easier particular steps of it. This paper focuses on the concept of e-therapy as a new modality of helping people resolve life and relationship issues. It utilizes the power and convenience of the Internet to allow synchronous and asynchronous communication between patient and therapist. It is important to underline that e-therapy is not an alternative treatment, but a resource that can be added to traditional psychotherapy by evaluating the effectiveness of them in the clinical practice. To enhance the diffusion of e-therapy, further research is needed to evaluate all the pros and cons.

Comments. This article focuses on CMC tools and is important for the literature review because it describes the transitioning from conventional therapy to E-therapy. The authors give a number of reasons why clients prefer online treatment to conventional treatment. It helps to support both the *Problem* and *Significance* areas of the literature review, and to help get a chronological frame of technology tools being used. Castelnuovo et al. have published several articles that contribute to etherapy. They are associated with the Applied Technology for Neuro-Psychology Laboratory at the Italian Institute of Auxolgy, in Milan, Italy.

❖ Cook, J. E. & Doyle, C. (2002). Working alliance in online psychotherapy as compared to face-to- face therapy: preliminary results. Cyberpsychology & Behavior, *5*(2), 95-105. doi:10.1080/09638230050009122

Abstract. Online psychotherapy, defined as the provision of mental health services through the Internet, is a growing field that has sparked an abundance of interest and controversy. A primary concern in the practice of online psychotherapy is whether a working alliance, considered a central component of successful therapy, can develop when participants are geographically separated. Working alliance scores were compared between a small, primarily female sample of online psychotherapy consumers and a representative sample of traditional face-to-face therapy clients. Results revealed significantly higher means on the goal subscale and composite score of the Working Alliance Inventory in the online sample, suggesting that a working alliance can be adequately established in therapy delivered online. No significant differences in the level of working alliance were found within the online psychotherapy sample with respect to modality of communication, client presenting problem, or therapist. Themes from comments suggest the importance for participants of the disinhibiting effects of the medium.

Comments. The central theme of the journal article is to compare online psychotherapy with conventional therapy. There is discussion about three web-based tools, chat, email, and audio conferencing. Cook and Doyle state that there is no major difference between which kind of communication modality is chosen for studies. The article provides support for formulating the *Audience* area of *the Introduction* section. It examines the way in which online therapists use technologies in practice. The article includes discussion of possible benefits from the clients' perspective. Cook and Doyle are both tied to academic college departments in the state of Oregon. Jonathon Cook is associated with the Social

Work department at Portland State University, and Dr. Carol Doyle is associated with the

Counseling Psychology department at Lewis & Clark College.

❖ Hanley, T., & Reynolds, D. (2009). Counselling psychology and the Internet: A review of the

quantitative research into the online outcomes and alliances within the text-based therapy.

Counselling Psychology Review, *24*(2), 4-13.

http://web.ebscohost.com.proxy.lib.pdx.edu/ehost/detail?vid=1&hid=9&sid=15695ece-

9583-4f8e-a576-

b17540e7c24f%40sessionmgr14&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=a9

h&AN=38797447

Abstract. Purpose: This paper examines the empirical research concerning counselling

psychologists who utilize the internet in their practice. More specifically, we summarise

the quantitative research of online therapeutic outcomes and alliances reported in text-

based therapeutic encounters. Background: Online psychotherapy creates much debate

within the therapeutic world. Many question the validity of entering into these relatively

uncharted waters, while others have begun working productively in this territory. To date,

a small pool of research examining the efficacy of such work has emerged and provides

the focus for this paper. Method: A review of the literature has been conducted with a

two-fold strategy. Initially a review of 16 quantitative outcome studies investigating this

area are presented and discussed – these have been selected from Barak, Hen, Boniel-

Nissim and Shapira's (2008) comprehensive review of the effectiveness of internet based

psychotherapeutic interventions. Following this, the focus is moved to the concept of the

online therapeutic alliance. A systematic review of the existing literature outlines five

pertinent quantitative studies and these are discussed in relation to key qualitative work in

this area. Conclusions: Conclusions are drawn highlighting that work in this medium shows great promise, with both successful outcomes and strong alliances being reported online. Such findings, although limited due to the dearth of the research available, challenge the views of those sceptical of counselling psychologists entering into virtual arenas.

Comments. This article describes text-based therapy, and it graphs various web-based communication tools. Hanley and Reynolds outline a number of studies done utilizing internet therapy, and which web-based tools those studies used to deliver the therapy. There is a fair amount of historical background into the field of online counseling. It has very useful charts that contain data about technology tools being used for online psychotherapy. The article, published in 2009, contains many of the current methods and technologies that are being used today. The resource comes from the Counseling Psychology Review journal which is a British journal. Terry Hanley is a lecturer in counseling at the University of Manchester, Manchester, United Kingdom.

❖ King, V., Stoller, K., Kidorf, M., Kindbom, K., Hursh, S., Brady, T., Brooner, R. (2009). Assessing the effectiveness of an Internet-based videoconferencing platform for delivering intensified substance abuse counseling. *Journal of substance abuse treatment, 36*(3), 331-338. doi:10.1016/j.jsat.2008.06.011

Abstract. Enhanced schedules of counseling can improve response to routine opioid-agonist treatment, although it is associated with increased time demands that enhance patient resistance and non adherence. Internet-based counseling can reduce these concerns by allowing patients to participate from home. This study assesses treatment satisfaction and response to Internet-based (CRC Health Group's e-Getgoing) group

counseling for partial responders to methadone maintenance treatment. Patients testing

positive for an illicit substance (*n* = 37) were randomly assigned to e-Getgoing or onsite

group counseling and followed for 6 weeks. Patients in both conditions responded

favorably to intensified treatment by achieving at least 2 consecutive weeks of abstinence

and 100% attendance to return to less-intensive care (e-Getgoing: 70% vs. routine: 71%,

ns). Treatment satisfaction was good and comparable across conditions. E-Getgoing

patients expressed a preference for the Internet-based service, reporting convenience and

increased confidentiality as major reasons. Integrating Internet-based group counseling

with on-site treatment services could help expand the continuum of care in methadone

maintenance clinics.

Comments. The main web-based tools discussed in this study are an online group

whiteboard, and video-conferencing sessions for stand-alone therapy. This internet study

of online psychotherapy addresses the strengths of applying therapy to the Internet. The

information in the article supports the building of the *Problem* area of the paper by

showing disconnect between what the client wants and what the industry is doing. Dr.

King is a board certified psychiatrist who has over 23 years experience in psychiatry. He

is also an associate professor, and medical director at Johns Hopkins Bayview Medical

Center.

❖ Lange, A., Rietdijk, D., Hudcovicova, M., van de Ven, J.-P., Schrieken, B., & Emmelkamp,

P. (2003). Interapy: A controlled randomized trial of the standardized treatment of

posttraumatic stress through the Internet. *Journal of Consulting & Clinical Psychology*,

71(5), 901-909. doi:10.1037/0022-006X.71.5.901.

Abstract. Online psychotherapy offers many advantages over face-to-face therapy. Interapy includes psycho-education, screening, effect measures, and a protocol-driven treatment via the Internet for people suffering from posttraumatic stress. The present article reports the results of a controlled trial on the Internet-driven treatment of posttraumatic stress and grief in a group of people who manifested mild to relatively severe trauma symptoms. Participants in the treatment condition ($n \_ 69$) improved significantly more than participants in the waiting-list control condition ($n \_ 32$) on trauma-related symptoms and general psychopathology. The effect sizes were large. On most subscales, more than 50% of the treated participants showed reliable change and clinically significant improvement, with the highest percentages being found for depression and avoidance.

Comments. The content in this journal article is centered on a case study for the treatment of post traumatic stress disorder (PTSD) and grief using a website as a web-based tool. Lange et al. call Interapy a type of *Internet driven-therapy*. Therapists provided clients counseling through writing assignments that were done on the Internet through their website, and with a secured login. There is a lot of information about the definitions and applications of this new field of online psychotherapy. Many of the paragraphs give concise definitions to establish terminology. The literature is used to support the *Purpose* and *Data Analysis* sections. The researchers of this controlled randomized study are from the University of Amsterdam, Netherlands. They have published a number of case studies involving online psychotherapy programs and are researchers in the Clinical Psychology department at the university.

❖ Larimer, M.E. & Cronce, J.M. (2007). Identification, prevention, and treatment revisited:

Individual-focused college drinking prevention strategies 1999–2006. *Addictive*

Behaviors, 32(11), 2439-2468. doi:10.1016/j.addbeh.2007.05.006

Abstract. This paper serves to update a prior review of the literature on individual-focused prevention and treatment approaches for college drinking [Larimer, M.E. & Cronce, J.M. (2002). Identification, prevention and treatment: A review of individual-focused strategies to reduce problematic alcohol consumption by college students. Journal of Studies on Alcohol Suppl. 14, 148–163.], and covers the period from late 1999 through 2006. No support was found for information/knowledge approaches alone, or for brief   values clarification approaches alone or with other informational content. Evidence was found in support of skills-based interventions and motivational interventions that incorporated personalized feedback, with or without an in-person intervention. Normative re-education interventions received mixed support, though personalized normative feedback was associated with positive outcomes. Significant advances have been made over the past seven years with respect to mailed and computerized feedback interventions, and interventions with mandated students. Much of the research reviewed suffered from significant limitations, particularly small sample sizes, attrition, and lack of appropriate control groups. More research is needed to determine the best methods for disseminating such interventions on college campuses, as well as additional research on interventions with high-risk groups of students.

Comments. This study mentions two commonly studied issues: alcohol support online, and the use of websites for therapeutic counseling. The article is used to support web-based tools used for intervention purposes, and how websites are being used in counseling young adult populations. The article is relevant to formulating the variety of

web-based tools used online. It is used as support when writing the Review of the

Literature, the *Search Results*, and the *Conclusion* sections of this paper. Larimer and

Cronce are researchers at University of Washington, School of Medicine Department of

Psychiatry and Behavioral sciences.

❖ Mallen, M., & Vogel, D. (2005). Introduction to the major contribution: counseling

psychology and online counseling. *The Counseling Psychologist, 33*, 761.

doi:10.177/0011000005278623

Abstract. This article introduces the Major Contribution, which focuses on online

counseling. Several acronyms and terms are presented to familiarize the reader with

distance-communication technology, including a definition of online counseling. The

authors show how counseling psychology provides a framework for specific questions

related to the theory, research, and practice of online counseling. In addition, they discuss

counseling psychology's emphasis on the scientist-practitioner model, history of process

and outcome research, and unifying themes to provide a context for the succeeding

articles on the research and practice of online counseling.

Comments. . This article mentions several web-based tools that are commonly used for

delivering online psychotherapy services including; chat, email, and video-conferencing.

They discuss why psychotherapeutic counseling is suited for the Internet. The article is

useful for supporting the *Significance* of the literature review. The authors of this paper

are researchers from Iowa State University, and the University of Texas. Mallen and

Vogel work together at Iowa State University and have been publishing academic articles

on internet counseling for over five years.

❖ Mallen, M., Vogel, L., Rochlen, A., & Day, S. (2005). Online counseling: Reviewing the

literature from a counseling psychology framework. *The Counseling Psychologist, 33*(6), 819-871. doi:10.1177/0011000005278624

Abstract. This article reviews the online-counseling literature with an emphasis on current applications and considerations for future research. It focuses on primary themes of counseling psychology including the history of process-outcome research and multiculturalism. It explores current gaps in the literature from a counseling psychology framework, including the field's focus on normal and developmental challenges and tasks, client strength and resilience, education and career development, prevention and wellness, and multiculturalism. In general, current evidence indicates that online counseling may be a viable service option for some clients, especially those who are typically isolated; however, questions remain regarding the effectiveness and appropriateness of online counseling.

Comments. The article is a review of related literature from a counseling psychology framework. One of the themes within the article is about the history of online psychotherapy. It indicates research on the topic is recorded. It supports the *Time Frame* area of the *Delimitations* and *Conclusion* of the paper. The authors of this paper are researchers from Iowa State University, and the University of Texas. Mallen and Vogel work together at Iowa State University and have been publishing academic articles on internet counseling for over five years.

❖ Norman, K. (2008). *Cyberpsychology: An introduction to human-computer interaction*. Cambridge University Press.

Abstract. This is an introductory book on the topic of cyberpsychology for researchers interested in learning about the subject. The book covers many basic terms about the field of cyberpsychology. There is information on the chronology of the field of cyberpsychology, and is useful for the student or professional who is new to researching cyberpsychology. It is stacked with terminology on the subject, and helps to differentiate the various departments that use online psychotherapy.

Comments. This book covers an array of resource tools being used in the field of psychology on the Internet. The author discusses possible avenues for both the private sector and public sector. There is a discussion of what is currently being done in the area of internet counseling with the use of virtual reality. Many of the chapters inside the book provide information that are useful to the *Purpose, Research Parameter*, and *Conclusion* sections. Dr. Norman is a professor at the University of Maryland who teaches course on *Cyberpsychology* and *Introduction to Psychology in the Digital Age*.

❖ Rochlen, A., Speyer, C., & Zack, J. (2004). Online psychotherapy: Review of relevant definitions, debates and current empirical support. *Journal of Clinical Psychology, 60*(3), 269. doi:10.1002/jclp.10263.

Abstract. The current article reviews the most recent literature addressing the definitions, ethical considerations, and potential strengths and limitations of online psychotherapy. In addition, a framework is provided for how to conceptualize and categorize different aspects of online psychotherapy for research purposes. Relevant studies of both online and face-to-face therapy as well as suggestions for future research are outlined.

Comments. The article aims to create a framework for online psychotherapy. Terms and definitions related to the field are included. The authors attempt to standardize all the

definitions that are used between different departments. The article covers outcomes of studies using web-based tools of email, video-conferencing, and audio-conferencing. The content of the article is constructive for the purpose of forming the study *Definitions* sections, but much of the material written is useful for creating the *Purpose* section. The three co-authors have different backgrounds. Aaron Rochlen is an assistant professor in counseling psychology at the University of Texas, Austin. Jason Zack an adjunct professor at the University of Miami and an independent behavioral science consultant. Mr. Cedric Speyer is the Clinical Manager of E-Counseling for Warren Shepell Consultants Corporation.

❖ Riva, G., & Galimberti, C. (2003). *Towards cyberpsychology: Mind cognition, and society in the Internet age.* Amsterdam: IOS Press.

Abstract. The resource focuses on cyberpsychology in general and has less information about studies that were done and more on the departments in universities that are using cyberpsychology. Riva and Galimberti show the development of the emerging field of cyberpsychology. They discuss the pioneers of the industry and what technology they applied.

Comments. Historical patterns of technology are the focus of this resource. Reading about all the historical studies that have taken place helps give an overview of the treatments therapists apply. The resource provides definitions in the field, and provides a history of the field which is valuable to readers not versed in the area. It is used to support the development of the patterns of described in the *Writing Plan*. The authors describe many tools that can be used for online psychotherapy. Email and chat software

were discussed in many studies. They are both researchers that work in Milan, Italy and both have co-authored many peer-reviewed articles on the subject of etherapy.

❖ Skinner, A., & Zack, J. (2004). Counseling and the Internet. *American Behavioral Scientist, 48*(4), 434-446. doi:10.1177/0002764204270280.

Abstract. Online counseling is the latest entry in a class of indirect therapy methods that extends back to Freud's work with "Little Hans." This article recounts the history of indirect counseling in general and online counseling in particular, explores the effectiveness of online counseling as a mode of therapy, deals with ethical issues, and examines the feasibility of online counseling as a business. The article concludes that online counseling is an effective and ethical form of counseling that can, with effort and care, become a feasible business.

Comments. There is discussion about the feasibility of using the internet for an online counseling business and the history of indirect therapy. The focus of Skinner & Zack's article helps professionals to understand the motives and possible implications of establishing a professional therapeutic services business online. They give a history of tools used years ago like telephone and letter writing, and mention the modern web-based tools for therapy. The material is useful for the development of the literature review, particularly in answering the Research Questions of the study. Adrian Skinner is a consultant psychologist in the United Kingdom, a member of the British Psychological Society, and associated with the University of Sheffield. Jason Zack is a consultant and adjunct professor at the University of Miami in Coral Gables.

❖ Suler, J. R. (2002). *Psychotherapy and clinical work in cyberspace.* Retrieved on April 6, 2010 from http://www-usr.rider.edu/~suler/psycyber/therintro.html

Abstract. Dr. John Suler is a pioneer in the field of cyberpsychology**.** In Psychotherapy and clinical work in cyberspace, John Suler delves into the questions that can only be asked in written works and not in articles related to case-studies done. He addresses the use of web-based tools in clinical work and on the internet.

Comments. This resource is presented from the clinical therapists' perspective. Suler identifies several different technology tools used by therapists and how they are implemented. Dr. Suler describes the development of telehealth using video-conferencing, which is useful for the *Introduction* section of the literature review. John Suler is the author of numerous books and articles on the topic of online psychotherapy. He is a professor in the Psychology Department at Rider University in Lawrenceville, New Jersey.

❖ Taylor, C.B. & Luce, K. (2003). Computer-and Internet-based psychotherapy interventions. *Current Directions in Psychological Science, 12*(18). doi: http://www.uam.es/personal_pdi/psicologia/pei/download/[2]Taylor2003ComputerInternet.pdf

Abstract. Computers and Internet-based programs have great potential to make psychological assessment and treatment more cost-effective. Computer-assisted therapy appears to be as effective as face-to-face treatment for treating anxiety disorders and depression. Internet support groups also may be effective and have advantages over face-to-face therapy. However, research on this approach remains meager.

Comments. There are numerous studies that reflect the use of internet software being used for therapy but not many that discuss all the differing types of software. This article describes the different types of internet software tools and the acronyms used. Barr and

Luce's article is instrumental in describing the use of the tools CBT, CAI, and CMC in

psychotherapy. This article centers on the use of online software tools used to treat clients

with a number of different types of clinical disorders. The article supports the writing of

the *Delimitations and Definitions* sections of the literature review. Both Taylor and Luce

are researchers at Stanford University Medical Center and have published other articles

about web-based tools and psychotherapy intervention on the Internet.

❖ Young, K. S. (2005). An empirical examination of client attitudes towards online counseling.

CyberPsychology & Behavior, 8(2), 172-177. doi:10.1089/cpb.2005.8.172.

Abstract. Trends over the past decade have shown that online counseling has grown in

terms of popularity among consumers and clinicians alike; however, little, if any

empirical evidence exists that examines client attitudes towards online counseling as

alternative to traditional face-to face therapy. Therefore, this study investigated client

attitudes towards online counseling. Data was collected from 48 e-clients who received

online counseling at the Center for Online Addiction. Variables such as client perceptions

and concerns about using online counseling, clients' reasons for seeking online

counseling over in-office treatment, and demographic profiles of e-clients were assessed.

Results suggested that Caucasian, middle-aged males, with at least a four-year bachelors

degree were most likely to use online counseling and anonymity, convenience, and

counselor credentials were the most cited reasons they sought online counseling

over in-office treatment. The lack of perceived privacy and security during online chat

sessions and the fear of being caught while conducting online sessions were the main

concerns reported by e-clients. A better understanding of client motives and perceptions

towards online counseling helps to guide treatment in using the Internet as a clinical tool,

especially as the Internet becomes increasingly more available in previously remote markets and the field of online counseling continues to grow.

Comments. The content in this article is primarily a study of online addiction. The aim of this journal article is to help therapists understand what clients think about online psychotherapy services. Some of the web-based tools mentioned in the article are real time chat, secured web-based messaging, video-conferencing and voice-over-IP (Internet phone).Young describes what clients previous history is with therapy, and their reasons for wanting online psychotherapy instead of convention therapy. The conclusions of the article help support the *Significance* and *Outcomes* parts of the *Introduction*. Dr. Kimberly Young is a psychologist considered to be an expert in online behavior and online addiction, and she is associated with the St. Bonaventure University School of Business.

Review of the Literature

The purpose of this section of the study is to summarize the selected literature pertaining to web-based tools. The section begins with a brief history of web-based tools, followed by a discussion to clarify terminology for web-based tools and a listing of the selected web-based tools. There is information detailing the choices that professionals have in selecting how to implement web-based tools, and information about what hardware is used to deliver online psychotherapy.

Brief History and Overview of Web-based Tools

In the early days of the Internet, web-based psychotherapy intervention was conducted in an informal manner that often did not involve interaction with a professional therapist (Skinner & Zack, 2004). The few people who were interested in such services, and who had internet connectivity at home, gathered in online support groups using bulletin boards and chat forums to talk about their mental health issues (Skinner & Zack, 2004).

 In the early 1990s the use of websites for web-based psychotherapy intervention appeared that dispensed mental health advice. Some of the earliest websites that supported the mental health community are PsychCentral (http://www.psychcentral.com/) initiated in 1995 and Uncle Ezra (http://ezra.cornell.edu/) initiated in 1986. These websites still exist and provide resources for mental health information today. PsychCentral is the largest and oldest mental health social network. It is the brainchild of Dr. John Grohol who is a pioneer in online mental health (PsychCentral, 2010). Uncle Ezra is the first online mental health help-line, created at Cornell University. The website is the creation of Jerry Feist in the Counseling Center, and Steve Worona from the Computer Services Department at Cornell (Uncle Ezra, 2010).

During the 2000s a trend emerged to deliver web-based psychotherapy intervention through the use of email (Murphy et al., 2008; Taylor & Luce, 2003). The widespread adaptation of free email services resulted in more people having email accounts regardless of whether they owned a computer or not. Currently, email is the most commonly used web-based tool for conducting psychotherapy intervention (Rochlen et al., 2004; Stofle, 2001). Newer forms of web-based tools being applied in psychotherapy are video, and virtual reality environments (Germain, Marchand, Bouchard, Guay, & Drouin, 2010; Lee, Kwon, Choi, & Yang, 2007).

Video-conferencing is becoming an option as a web-based tool, influenced by projects that the military has implemented using video-conferencing to connect therapists to soldiers in Iraq and Afghanistan who are in need of therapy services (Hill et al., 2004). Academic institutions are now doing case studies involving video-conferencing in support of psychotherapy interventions (Brouchard et al., 2004; Capner, 2000; Germain et al., 2010; Nelson, Barnard, & Cain, 2003).

The growth of online psychotherapy has drawn the attention of organizations that are associated with the fields of counseling, psychology, and psychiatry. The National Register of Health Service Providers in Psychology is an organization that sponsors continuing education for psychologists and every ten years since the 1980s they have published what has come to be known as the Delphi poll on the future of psychotherapy (Norcross et al., 2002; Prochaska & Norcross, 1982). According to the latest poll two trends that are forecasted to grow in the new millennium are the use of cognitive-behavior therapy, and virtual therapy services (p.3). Mental health associations have acknowledged the growth and are adding the concept of online psychotherapy to their existing code of ethics (ACA, 2010; APA, 2010). Furthermore, new organizations like the International Society for Mental Health Online (ISMHO) created in 1997

exist to help support the online psychotherapy community (International Society for Mental Health Online [ISMHO], 2010).

Clarifying the Terminology of Web-based Tools

In order to inventory web-based tools there must be a common definition for what a web-based tool is and what it is not. According to Barak et al. (2009) the use of varied terms that describe psychotherapy delivered on the Internet results in a lack of clarity and inconsistencies within the field of Internet-based psychotherapy interventions. For the purpose of this literature review the terms *Web-based* and *Internet-based* are treated as synonymous. Furthermore, *internet-supported therapeutic inventions* (Barak et al., 2009), *computer-mediated psychotherapy* (Suler, 2009), and *internet-based psychotherapy interventions* (Taylor & Luce, 2003) are viewed as identical in meaning.

Web-based psychotherapy intervention as defined by Barak et al. (2009) can be categorized into three subtypes: (1) web-based educational interventions; (2) self-guided web-based intervention; and (3) human-supported web-based interventions. The key components of web-based psychotherapy interventions are (a) program content, (b) multimedia choices, (c) provision of interactive online activities, and (d) provision of therapeutic guidance and feedback (Barak, 2009). Barak et al. (2009) categorize web-based interventions and online counseling as separate classifications of Internet supported interventions (p.5). However, web-based interventions often have online psychotherapy associated with them (Gega, Marks, & Mataix-Cols, 2004). Therefore, for the purpose of this literature review web-based interventions are viewed in a more general manner that includes online counseling and other therapy.

When discussing web-based psychotherapy tools researchers sometimes use the terms *communication modalities* or *communication tools* to represent *web-based tools* (Castelnuovo,

2003; Hanley & Reynolds, 2009). There are two types of communication by which all web-based tools are delivered; either synchronous or asynchronous. Synchronous mediated communications occur in nearly real time where the therapist and client are communicating back and forth in a single session. In synchronous communication the therapy is not exactly real time due to potential lag time that may occur depending on the type of web-based tool being used (Suler, 2000). A few examples of synchronous web-based tools include internet relay chat (IRC), internet telephony, and video- conferencing. Asynchronous communications occur when the therapist and client communicate with each other, but not at the same time. Asynchronous communications are conducted in a longer duration of time than synchronous. A few examples of asynchronous web-based tools include email, blogging, and pre-recorded video.

Choices for Delivering Web-based Psychotherapy Services

The professional psychotherapist who desires to implement online psychotherapy services has an important business decision to make regarding how best to deliver these services. In particular, he/she must decide whether to (a) work independently, or (b) subscribe to an existing fee-for-service website or full service website. Psychotherapists need to be aware of the costs and benefits of each approach of delivering online psychotherapy services.

One approach of delivering web-based tools is for the professional psychotherapist to join a website that provides all the technology tools to the therapist when they sign up for an account. The commercial companies that offer web-based tools to professional therapists are called "eclinics" (Skinner & Zack, 2004). These fee-for-service websites provide the therapist with an array of services that come with their account. Secured email and messaging, and credit card options for client payments are a few of these service options (Rochlen et al., 2004).

Some of the benefits of choosing to use an eclinic for delivering online psychotherapy are (a) security: data security is included in most plans, (b) speed of implementation: it is much faster to implement service because the therapist only needs to register for an account, and (c) cost: it is less expensive than creating a new custom website with all the functionality a therapist would desire. For the client, it is easy to select criteria when trying to find a therapist who treats specific disorders and eclinics verify the credentials of the therapists.

Alternatively, a therapist may decide to develop their own website, limit their web-based tools to the standard use of email therapy, or use free web-based tools that are available. The first option of developing a fully functional and secure website is a costly choice, and includes the need to provide payment processing, web development, web-management services, and marketing involved in running the website. Some therapists may choose alternatively to restrict their web-based tools to exchanging emails with clients from within the secured email system used at their office.

There are also several free web-based tools that are used in social networking that can also be used for online psychotherapy. Free email, instant messaging (IM), blogging, and software like Skype (http://www.skype.com/) enable a therapist to access relatively inexpensive forms of web-based tools. Social networking tools such as Skype offer inexpensive streaming audio and video. Many of the alternative companies that provide audio and video services set their prices based on medium sized companies who want to use the services and not individual business professionals.

One of the benefits of developing and supporting a professional office website for online psychotherapy is the professional has complete control over the functionality of the website. A professional does not have to pay monthly fees indefinitely to a third party service provider to

establish online psychotherapy services. Another benefit for professionals is the ability to host their own discussion forums, and blog from the same website where they provide online psychotherapy services.

The fact that therapists have access to free web-based tools and can use them in support of psychotherapy has caused much controversy in the professional community. Professionals administering web-based psychotherapy present many new ethical and professional concerns for the field (Hsiung, 2001). Security of client data, and the lack of any laws prohibiting licensed therapists from choosing free web-based tools, is a growing concern in professional therapy associations (Hsiung, 2001; Mallen et al., 2005; Taylor & Luce, 2003). Some security threats that are an issue for online therapists are data transmission problems, or technical mistakes from either the therapist or client (Kanani & Regehr, 2003). Taylor and Luce (2003) state that, "the Internet creates an environment where information about patients can be easily accessed and disseminated. Patients may purposely or inadvertently disclose private information about themselves and in on-line support groups, about their peers" (p.21).

Hardware Used to Deliver Web-based Psychotherapy

The standard piece of hardware that is used to deliver web-based psychotherapy is the personal computer; a PC or Macintosh machine. There is currently no data pertaining to what percentage of web-based interventions take place with the use of the computer versus other devices. Inventories that exist focus on the communication modalities (web-based tools) and the number of studies that have used the tool (Barak et al., 2008). Alternatives to using a computer are using (a) a portable digital assistant (PDA); (b) a smartphone; or (c) web-enabled tablet like an iPad.

Conclusions

According to Barak et al. (2009) an increased acceptability of using the Internet as a legitimate method for delivering online psychotherapy has contributed to the growth of online psychotherapy (p.4). Professional therapists and health care organizations who are offering online psychotherapy services can expect to see an increase in demand for these services. As noted by Skinner and Zack (2004), "although online psychotherapy has the potential to reduce costs, it also is likely to increase use because of its convenience". Therapists likely to benefit the most are those who specialize in providing therapy for the most commonly treated disorders online including mood disorders, anxiety disorders, addictions, and eating disorders.

A Descriptive Inventory of Various Types of Web-based Tools and Mental Health Conditions Treated Online

A variety of web-based tools are used to provide online psychotherapy, but inventorying them is difficult because many of the web-based tools are used jointly. For example, a client may be using a website for therapy and also use email to write and transmit assignments as part of the therapy (Cook & Doyle, 2002; Lange et al., 2003). In another example, they might use a website that provides a therapy program and also receive telephone feedback from the therapist (Spence, Holmes, March & Lipp, 2006). Some therapists use online psychotherapy as an adjunct service to traditional face-to-face therapy and therefore may see a client both through a web-based tool and in the office (Yager, 2003). Being mindful of the ways in which multiple web-based tools can be combined to deliver psychotherapy, web-based tools can be categorized by tool type.

Websites. The use of websites for delivering online psychotherapy is one of the earliest forms of technology to be utilized in the field of cyberpsychology (Skinner & Zack, 2004). Early development of websites centered on providing clients an informational resource on a multitude

of mental health topics such as depression (Riva & Galimberti, 2003) and suicidal ideation (Stoney, 1998) and used asynchronous web tools like email to provide counseling to the client (Skinner & Zack, 2004). Today there are a variety of types of websites that are used in online psychotherapy, including (a) traditional websites; (b) single program websites; and (c) commercial full-service websites. The traditional websites that delivered information, assessment tools, and email therapy are still assessable today, including Uncle Ezra and PsychCentral.com (Skinner & Zack, 2004). Today there are also websites that are developed for studies to host a single therapy program, focused on a single mental health disorder; examples include the Interapy website (Lange et al., 2003), and the CLIN-NET website (Spence et al., 2006). There is an increase in website development that delivers full service where therapists and clients can meet (Hagland, 2006). Companies like LetsTalkCounseling.com, NetCounselors.com, Psychonline.com, and The Counselors.com provide small group practices or have individual therapist services (Skinner & Zack, 2004). So called full service websites offer a number of other web-based tool capabilities from within secured websites, such as single session one-to-one therapy between the client and therapist, and one-to-many therapy sessions to support group therapy counseling (Hagland, 2006). One benefit of implementing a website as a web-based tool is that it is easy to integrate other web-based tools. Websites can provide hyperlinks with information, add video clips, and attach document files all from a single portal (Rochlen et al., 2004).

Email. Online psychotherapy conducted via email is the most prevalent way to deliver psychotherapy, and there is more information about using email as a web-based tool because of the many case studies that have been done (Rochlen et al., 2004). Ten years ago, Suler (2000) stated, "email is the method most often used by psychotherapists- mostly because it's easy to use

and rapidly becoming a very popular method of communicating"(p.153). Suler's statement is not surprising and data trends at the Pew Research Center confirm the popularity of email usage. According to the December 2009 data trend statistics, which surveyed what people are doing online, 89% of internet users access some sort of email account (Pew Research Center, 2010). One benefit of using email as a web-based tool to deliver psychotherapy is the potential for an increased frequency in communications between the therapist and client, which may help the client feel the therapist is still present and listening in between face-to-face therapy sessions (Yager, 2003).

Internet Relay Chat (IRC) and Instant Messaging (IM). In the early days of the internet some informal utilization of the web-based tools of chat and instant messaging took place but new businesses exist today that specialize in using these web-based tools (Hagland, 2006; Skinner & Zack, 2004). One such company is MyTherapyNet (http://www.mytherapynet.com/), which specializes in using instant messaging. MyTherapyNet is one of a handful of commercial businesses that provide online psychotherapy that is secure, and in compliance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA, 2010). Chat and instant messaging are similar tools; both are synchronous tools and provide immediate feedback that is bi-directional (Suler, 2000). According to Suler (2000), as a synchronous too, chat has the potential advantages of creating uncensored disclosures by clients, and can create a feeling of being in real time since the communication is continuous.

Forums and Bulletin Boards. Skinner and Zack (2004) claim that the use of web-based tools like forums and bulletin boards used for online support groups is the precursor to etherapy. Websites that provide services to the mental health community like PsychCentral, Uncle Ezra, and Depression Central utilize forums and bulletin boards for web-based tools (Skinner & Zack,

2004). Some benefits of using these web-based tools are the relative inexpensive to integrate into a professional's website and therapists can answer questions at their convenience (Rochlen et al., 2004). These web-based tools provide clients with a means to disclose information and to feel more uninhibited when disclosing personal or embarrassing information than they might feel in a face-to-face therapy session (Suler, 2002), for example people who suffer shyness (Ko et al., 2009). Support groups that use these tools enable people to receive support and sympathy but because most forums and bulletin boards are open to the general public unsupportive, negative posts called *flaming* can also happen (Stoney, 1998).

Video Conferencing and Webcams. Providing online psychotherapy with the use of video hardware and software is a more recent development (Hagland, 2006). Video-conferencing case studies established in the beginning of the 2000s were conducted using video satellite and supported by either the military or large universities (Hill et al., 2004; Nelson et al., 2003). Anxiety disorders of panic disorder, PTSD, and phobias are commonly treated online with the used of video-conferencing (Brouchard et al., 2004; Hill et al., 2004; Nelson et al., 2003).

Professional therapists believe video-teleconferencing (VTC) is synonymous with *telehealth,* most likely due to the fact early usage of videoconferencing used satellite connections (Castelnuovo et al., 2003). Some methods of utilizing video-conferencing are either through a dedicated VTC, a desktop VTC using telephone data transfer, a desktop VTC using Internet data transfer, or a retrofit VTC (Riva & Galimberti, 2003). These methods of providing video are extremely expensive to implement; dedicated VTC's can range between $7,000 to $50,000 per unit, and the least expensive, a retrofit VTC, costs between $350-500 per unit. The cost makes it impractical for most private practice professional to gain access to them. The single biggest benefit to providing video as a web-based tool is that the environment creates a feeling of being

with the person in real time (Suler, 2000). Over the last decade technology tools like the webcam

and inexpensive powerful data lines have made it more affordable to implement

videoconferencing (Bouchard et al., 2000). Private practice therapists are able to lease streaming

video through accounts with companies like GoToMeeting and Cisco that enable them to log in

and create a video conferencing session remotely from most any location in the world. These

web-based video accounts can still be expensive for the therapist who only conducts a few online

psychotherapy sessions a week but they have much higher security and encryption risks than free

services like NetMeeting, and Skype.

An alternative to leasing an expensive VTC line is to join one of the growing numbers of

companies that provide these services to professional therapists. LetsTalkCounseling

(http://www.letstalkcounseling.com/) is one such company. LetsTalkCounseling supplies web-

based video links for professional therapists that are easy to use, and is purported to be highly

secure (Hagland, 2006). LetsTalkCounseling founder Arthur F. Cooksey III claims his

companies' encryption and security is four times more powerful than the Department of

Defense's standard (Hagland, 2006, p. 40). Similar companies include NetCounselors.com, and

The Counselors.com.

The decrease in the cost of computer hardware and the increase in the quality of the

hardware that support video conferencing make it possible to consider utilizing web cameras

(webcams) that are either integrated in personal computers or attached to them (Norcross,

Hedges, & Prochaska, 2002). Webcam usage for purposes of online psychotherapy is so new

there is little mention of it as a web-based tool option, and only in recent years is it even included

in studies identifying web-based tools (Hanley & Reynolds, 2009, p.7). The webcam is relatively

obscure in the online psychotherapy community as a stand-alone tool. This web-based tool is

currently restricted to being used by a therapist through another medium like accessing one of

the full-service websites that provide therapists with secured video sessions.

   Virtual Reality Software and Other Computer Environments. There are a relatively

large number of case studies and research materials that discuss the use of CAI, CMC, and

virtual reality (VR) systems as a web-based tool (Lee et al., 2007). Today VR systems are used

psychotherapy treatment by the military and at universities (Botella, Garcia-Palacios, Guillen,

Banos, Quero, & Alcaniz, 2010; Radoslaw, Szymanska, & Stanislaw, 2010).The data collected

from these studies discusses the effectiveness of VR software delivered online (Lee et al., 2007).

Psychology departments throughout the world have developed research studies that use

specialized software programs (Barak et al., 2008; Chan, 1990). One commercial VR

environment is Second Life (http://www.secondlife.com/). Castelnuovo et al. (2003) briefly

mention the existence of Second Life but state is has not been used in support of online

psychotherapy. Large companies in the private sector like International Business Machines

(IBM) however are using Second Life to conduct weekly business meetings between distance

offices (FrontLine, 2010).

   Text Messaging and Short Message System (SMS). Some universities, including the

University of Haifa and the University of Toronto have tested using text messaging and SMS in

research studies (Barak et al., 2008). These web-based tools are often used to gather data online.

For example, when treating addiction a researcher may have the client use either a pager or SMS

to send messages when they feel the need for the drug they are abusing (Barak et al, 2008;

Kuntsche, & Robert, 2009). Therapists can analyze the messages to try to see what environments

trigger the client to abuse. There are some problems with attempting to use these web-based tools

for communicating back and forth between therapist and client. Text messaging can be time

consuming, and the person sending the message is limited to only a few lines of words (Barak et al., 2008; Suler, 2000). Another problem is privacy, since the majority of messages are sent to personal cell phones where anyone could view the message; the result is that some clients are not interested in using SMS for online psychotherapy (Suler, 2000).

Overview of Mental Health Conditions Treated Online

The majority of mental health conditions that are being treated online coincide with the three major categories that can be found within the Diagnostic and Statistical Manual of Mental Health Disorders (DSM-IV). These categories are (a) anxiety disorder (b) mood disorder and (c) personality disorder. The disorders associated with these three categories are mental health issues commonly diagnosed in professional therapy offices (National Institute of Mental Health [NIMH], 2010). The only exception to online treatments that do not fall in the three major categories is the use of the Internet in the treatment of eating disorders (ED's). Eating disorders afflict around 4 % of the populations, and consist of three main types' anorexia nervosa, bulimia nervosa, and binge-eating disorder (NIMH, 2010). Fewer people suffer from an eating disorder than suffer from personality disorder yet there are far more online psychotherapy studies, and web-based interventions for the disorder (Fairburn, Cooper, Shafran, 2003; Yager, 2003).

Anxiety Disorders. According to the NIMH there are approximately 40 million American adults (18%) over the age of 18 who suffer from some form of anxiety disorder (NIMH, 2010). As such, anxiety disorders are the single largest mental health issue within the American adult population (NIMH, 2010). Anxiety can be diagnosed in a general form called *generalized anxiety* but other types of anxiety disorders include panic disorder, OCD, PTSD, and phobias of any kind (NIMH, 2010). One of the most commonly studied topics is the use of online psychotherapy for treatment of anxiety disorders (Germain et al., 2010; Lang et al, 1970;

Lange et al., 2003). Studies have been done to treat PSTD (Botella et al., 2010; Lange et al., 2003), childhood anxiety (Spence et al., 2006), OCD (Anthony, 2000), panic disorder (Bouchard et al., 2000), and phobias like fear (Lang et al., 1970).

Mood Disorders. Some forms of mood disorders include major depression and bipolar disorder (NIHM, 2010). Mood disorders affect around 9.5 % of the adult American population, and the median age for onset for a mood disorder is 30 years (NIMH, 2010). The majority of people who are affected with the disorder suffer from either major or minor depression; bipolar disorder affects only 2.6 % of the population (NIHM, 2010). Online psychotherapy for treatment of mood disorders exists in the form of support groups and informational websites (Christensen, Griffiths, Groves, & Korten, 2006; Rochlen et al., 2004). There are as many case studies for the treatment of mood disorders online as there are for anxiety disorders including those conducted by Nelson et al., 2003, Proudfoot, 2004 and Ruwaard et al., 2009. Studies for the treatment of mood disorders also span various age demographics. Nelson et al. (2003) treated children ages 7 through 14, Ruwaard et al. (2009) treated adults, and Spek et al. (2008) studied depression in people over 50 years old.

Personality Disorders. There are three groups of commonly diagnosed personality disorders (1) antisocial disorder; (2) avoidant personality; (3) borderline personality (BPD). Personality disorders affect an estimated 9.1% of the population. Although personality disorders are a relatively large classification within the DSM-IV (APA, 2010), not as many case studies exist that discuss the implementation of online psychotherapy for the purpose of treating the disorder. The three most common personality disorders are antisocial, avoidant, and borderline personality (NIHM, 2010). Avoidant disorder which is marked by character traits like social inhibition, feelings of inadequacy and social ineptness, sensitivity to negative evaluation has the

highest rate of affliction with approximately 5.2 % of the adult population over 18 diagnosed

with the disorder. A few case studies published attempt to treat people online who have forms of

avoidant disorders (Berger, Eohl, & Casper, 2009; Botella, Gallego, Garcia-Palacios, Guillen,

Banos, Quero, & Alcaniz, 2010; King & Poulos, 1998). There are few studies devoted to

personality disorders like social phobias. One possible reason is that when treating a disorder

such as social phobia, it is difficult to discern effectiveness, or whether the Internet is helping the

client or possibly enabling them to avoid people. Campbell, Cumming, and Hughes address this

issue in their article titled, "Internet Use by the Socially Fearful: Addiction or

Therapy?"(Campbell, Cumming, & Hughes, 2006). Their study shows that although people who

over use the Internet can become more depressed those who use specific social functions like

chat are actually more psychologically robust (p.80).

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Appendix A

Preliminary Search Summary Results

SEARCH TOOL	SEARCH TERMS	# RESULTS	QUALITY/RELEVANCE
DATABASES			
Academic Search Complete	Etherapy, Internet Therapy, Online therapy, Cyberpsychology, Online counseling	1,202	Good sources of materials contained both information systems and social science materials.
PSYCH INFO	Etherapy, Internet Therapy, Online therapy, Cyberpsychology, Online counseling	15,826	Excellent source for social science material, had to filter for articles that didn't focus to effectiveness of the therapy
PubMed Central	Etherapy, Internet Therapy, Online therapy, Cyberpsychology, Online counseling	1,1100	Good source for telemedicine articles and medical internet research. More psychiatric than general counseling.
MEDLINE (OVID)	Etherapy, Internet Therapy, Online therapy, Cyberpsychology, Online counseling	10,226	Similar to OVID, more sources based on the science of psychology and not on the technology
EBSCO HOST	Etherapy, Internet Therapy, Online therapy, Cyberpsychology, Online counseling	5,319	Good mixture of engineering and social science fields.
GOVERNMENT REFERENCE			
LIBRARY OF CONGRESS	B Classification Psychology T Classification Technology	35	Useful for defining limitations to subject topic.
SEARCH ENGINES			
GOOGLE/ Scholar	online counseling cyberpsychology online therapy internet therapy	617,000 10,200 1,760,000 270,000	Fair, some good peer reviewed articles but mostly repeats of the database searches.
CLUSTY	online counseling internet counseling online therapy internet therapy	53,200,000 34,700,000 68,700,000 48,000,000	Fair, the clusty lab brought up some interesting key words. Many hits due to collecting every available webpage with keyword in it.