UNIVERSITY OF CALIFORNIA

Santa Barbara

Factors Related to Preference for Online Psychological Treatments

Among Active Internet Users

A dissertation submitted in partial satisfaction of the

Requirements for the degree Doctor of Philosophy

in Counseling, Clinical, and School Psychology

by

Robert A. Duff

Committee in Charge:

Associate Professor Steven Smith, Chair

Associate Professor Erin Dowdy

Assistant Professor Ty Vernon

December 2015

The dissertation of Robert Allen Duff is approved.

_____

Erin Dowdy

_____

Ty Vernon

_____

Steven Smith, Committee Chair

June 2015

Factors Related to Preference for Online Psychological Treatments

Among Active Internet Users

ACKNOWLEDGEMENTS

First and foremost, I need to thank my wife Joelle Duff. Without her, there is no way that I would ever have made it out of this alive. Not only is she my soulmate, with whom I learned the meaning of love, but she has been continuously understanding and supportive throughout my entire academic career. It has been a crazy ride, sweetheart, and there is no person that I would rather have with me on this journey.

I would also like to thank my family for contributing the best parts of themselves to me. In particular, my mother for reasons that I couldn't possibly fit on a single page. I am forever grateful. This degree is not only for me. This is a new branch on the family timeline and it is only by the confidence, support, and sacrifices of these special people that I could have ever made it to this point.

Obviously, I must also express gratitude to my advisor and friend, Steve Smith, for taking a chance on me. I am obviously not your typical graduate student and I was so fortunate to find a decidedly non-average advisor to lead me down this road. Thank you for putting up with the chaos, confusion, and craziness that I have consistently brought to the table.

In no particular order, I am also grateful for my dog, wine, my friends, video games, and coffee for loving my unconditionally and welcoming me back with open arms (or paws) no matter how far I may stray.

Last, but certainly not least, I want to thank my fans, my followers, and my community. To know that tens of thousands of you always have my back and are invested in my success is one of the most humbling experiences of my life. I owe every single one of you a high five.

VITA OF ROBERT ALLEN DUFF
June 2015

EDUCATION

Bachelor of Arts in Psychology, California Lutheran University, May 2010 (summa cum laude with highest honors)
Masters of Arts in Counseling Psychology, University of California, Santa Barbara, June 2012
Doctor of Philosophy in Counseling, Clinical, and School Psychology, June 2015 (expected)

CLINICAL EXPERIENCE

2006-2011: Behavior Specialist and Supervisor, Holdsambeck and Associates
2011-2013: Student Clinician, Psychology Assessment Center, UCSB
2011-2013: Therapist – Advanced Practicum, Hosford Clinic, UCSB
2013-2014: Clinical Intern, Brain Injury Center
2011-2014: Neuropsychological Psychometrist, Insight Neuropsychology
2014-2015: Psychology Intern, Kaiser Permanente

TEACHING EXPERIENCE

Fall 2011, Fall 2012: Teaching Assistant, Cognitive Assessment, UCSB
Winter 2012: Teaching Assistant, Neuropsychological Assessment, UCSB
Spring 2012: Teaching Assistant, Personality Assessment, UCSB
Fall 2011, Winter 2012, Spring 2012: Teaching Assistant, Introduction to Vocational Assessment, UCSB
Fall 2013: Teaching Assistant, Introduction to Applied Psychology, UCSB
Winter 2013, Spring 2013: Teaching Associate, Introduction to Applied Psychology, UCSB

POSTERS AND PRESENTATIONS

Duff, R. & Gerson, M (November, 2009). *Comfort and Disclosure in Fact-to-Face vs. Online Communication.* Poster presented at the Southern California Conference for Undergraduate Research, Carson, CA.

Pilar S., Duff, R., Espinoza, R., Cook, A., Smith, S.R. (March, 2011). *Cultural and ethnic diversity in psychological assessment literature: A preliminary content analysis.* Paper presented at the Society for Personality Assessment Conference, Boston, MA.

Landheer, M., Duff, R., Smith, S.R. (March, 2012). *Mental toughness and mindfulness in athletic performance.* Poster presented at the Society for Personality Assessment Conference, Chicago, IL.

Smith, S.R., Norman, K., Eichler, W., & Duff, R. (March, 2012). *The utility of assessment project: Methods, updates, & current status.* Paper presented at the Society for Personality Assessment Conference, Chicago, IL.

Duff, R. & Smith, S.R. (March, 2013). *The effect of suggested matching on psychotherapy expectations.* Poster presented at the Society for Personality Assessment Conference, San Diego, CA.

AWARDS

Central Doctoral Fellowship, University of California, Santa Barbara, 2010-2014

ABSTRACT

Factors Related to Preference for Online Psychological Treatments

Among Active Internet Users

by

Robert Allen Duff

Internet-based approaches to psychological treatment have risen in popularity and have been shown to be efficacious in treating a wide array of issues (McNeilly & Howard, 1991; Lipsey & Wilson, 1993). The purpose of this study was to move beyond evaluation of treatment efficacy and instead identify the factors that might be related to a preference for these non-traditional modes of treatment, which is an essential aspect of rigorous behavioral research. Using an online survey, 1404 self-reported adults in the United States provided information about demographics and Internet behavior as well as measures of personality, depression, anxiety, and attitudes toward receiving help. Finally, the participants were instructed to watch three short video vignettes depicting face-to-face therapy, online guided self-help, and text-based Internet psychotherapy before indicating their preferences for each modality. Results suggest that individuals who preferred either of the two online approaches had significantly lower extraversion, difficulty attending routine in-person meetings, more negative attitudes toward receiving help, and lower satisfaction with previous treatment than participants who preferred face-to-face therapy. It appears that there may be distinct factors

that distinguish individuals with an interest in Internet-based psychological treatment from those who prefer traditional face-to-face therapy. This study begins the process of exploring the types of people that are likely to be interested in Internet-based psychological treatment.

Keywords: Internet, Internet-based psychotherapy, online therapy, Internet self-help, binary logistic regression, mental health

Table of Contents

Factors Related to Preference for Online Psychological Treatments
Among Active Internet Users

Approximately 74% of American adults actively use the Internet (Raine & Zickuhr, 2010). Given two random individuals from the United States, there are few other qualities that they are more likely to have in common. To put this in perspective, these two hypothetical individuals are more likely to have Internet use in common than their gender, and are just about as likely to both endorse Christianity as a religion (Kosmin & Keysar, 2009). Over the past decade, Internet-based interactions have become a primary source of interpersonal communication. Estimated figures on Internet use characteristically change rapidly from year to year, but it is currently believed that approximately 65% of adults who use the Internet engage in social networking through websites like Facebook (Madden & Zickuhr, 2011). Taken with the fact that nearly all individuals who actively use the Internet send personal emails regularly and most engage in conversations through chat or instant messaging, it is important to not ignore the pervasiveness of Internet-mediated interpersonal communication in the United States (Purcell, 2011).

Given that the majority of American adults use the Internet for interpersonal communication as well as for convenient access to information, many individuals have begun to seek out sources of psychological help online. A simple Internet search reveals results such as betterhelp.com, online-therapy.com and therapy.com, which claim to offer professional counseling and psychotherapy services over the Internet. Because people are currently seeking out and undergoing Internet-based counseling and psychotherapy, it is essential to understand what Internet-based therapy looks like, how it may be beneficial for clients, and for whom in particular, it might be appropriate. There exists a large and growing body of evidence to support the efficacy of Internet-based alternatives to traditional

psychotherapy, but there remains a dearth of information about what types of people engage in these online treatments.

Treatment Gap in Psychotherapy

Although psychotherapy has been shown to be beneficial for individuals suffering from a variety of issues (Wampold, 1997), a portion of the population remains unwilling or unable to utilize the current model of psychological help, which results in a treatment gap between the prevalence of psychological disorders and the proportion of affected individuals who receive treatment. This treatment gap occurs for a wide variety of reasons including lack of availability of services, geographical isolation, and perceived stigmatization regarding psychopathology or mental health services. Rates of treatment for many psychological disorders are low and there often exists hidden populations of people who avoid seeking help due to experiences of shame or resulting from specific intrapersonal characteristics (Blankers, Koeter, & Schippers, 2011). For instance, men with erectile dysfunction have been recognized as a population that is not likely to find treatment due to embarrassment, regardless of the fact that there are empirically validated psychotherapeutic methods of treating the disorder (Andersson et al., 2011). Treatment for anxiety disorders can also be paradoxical in that the very issues that the individual living with anxiety must endure are also the issues that might prevent them from seeking mental health services (Carlbring et al., 2012). Indeed, it appears that less than 40% of individuals with anxiety access mental health services (Andrews et al., 2003). Additionally, for some issues such as depression, not only are rates of seeking treatment low, but the barriers to typical psychotherapeutic treatment often lead to engagement in treatments that are less effective or altogether questionable (Perini, Titov, & Andrews, 2009; Kessler et al., 2009).

There are myriad reasons why one might avoid or feel unable to seek out psychological help. Concerns about stigmatization has been identified as one of the primary inhibiting factors in utilization of mental health services (Zaraloudi & Madianos, 2010). In particular, those who have concerns about being stigmatized are much less likely to seek out psychotherapy to deal with mental illness (Vogel, Wade, & Hackler, 2007). There are broadly two categories of stigma that have been identified as associated with mental health services: public stigma and self-stigma. Public stigma refers to perceptions endorsed by the general population that a person who seeks therapy or mental health services is socially unacceptable. The related construct of self-stigma is defined as reduction in a person's self-esteem due to their own perception that they are socially unacceptable (Corrigan, 2004).

In addition to public perception of certain disorders and illnesses, culture plays an important role in an individual's sense of stigmatization. For instance, studies have shown that self-concealment of mental health issues is particularly prevalent among young adults that identify as African American (Masuda & Anderson, 2012). Asian, Asian American, and Pacific Islander populations have also been shown to have differentially lower rates of mental health service utilization than European American populations, despite higher rates of depression and anxiety (Lam, Pepper, & Ryabchanko, 2004). In addition to ethnicity, other subcultures such as members of the armed forces and college students have demonstrated significant self-stigmatization that leads to underutilization of therapy and other psychological treatments (Blais & Renshaw, 2014; Na-Yeun & Miller, 2014).

Given the treatment gap in the field of mental health and the variety of factors that influence the perception of stigmatization among people suffering from mental illness, it is reasonable to suspect that there may be a particular population of individuals who might not

otherwise seek psychotherapeutic treatment, but might be willing to engage in treatments that occur over the internet, where they maintain a certain level of relative anonymity in terms of outward appearance and culture.

History of Internet-Based Treatment

When considering psychotherapy, it is likely that most envision the classic scenario of patient and therapist sitting across from one another in a private room, speaking about the client's concerns. This is understandable, as most psychotherapies adopt a similar model (Prochaska & Norcross, 2010). Norcross (1990) defines psychotherapy as involving the use of informed clinical methods derived from established psychological principles for the purpose of assisting people in modifying characteristics in desirable ways. This definition is intentionally broad. Not all psychotherapies look the same. Additionally, psychotherapy is a dynamic and progressive field that frequently benefits from new theories, techniques, and modalities (Prochaska & Norcross, 2010). As such, with the advent of the computer, there has been a natural inclination on the part of researchers and clinicians to find ways to bridge the gap between technology and mental health.

For the past four decades, there have been many attempts to integrate psychotherapy into computer-delivered programs (Perini, Titov, & Andrews, 2009). Since as early as the 1960s, computers have been used to try to replicate teaching and therapeutic interactions. In 1966, a computer program called ELIZA was created to simulate the techniques used in Rogerian client-centered therapy. The user would input text into a simple box on the computer screen via the keyboard. ELIZA, the simulated therapist, would then reflect, paraphrase and provide encouraging statements such as "I understand" or "What makes you feel that way?" (O'Dell & Dixon, 1984). In the same year, Colby, Watt and Gilbert (1966)

developed an automated computer program that attempted to conduct a therapeutic dialogue with the user based on the psychoanalytic technique of free association.

Although these programs are landmark developments in the field of computer assisted psychotherapeutic intervention, they were marked with several significant limitations. The computer programs had an inability to process "natural" language and instead generated responses based on literal interpretations of language. For instance, if the user were to indicate that they were "given a hand," the programs would not understand whether they were implying that they had received help from someone or that they were given a round of applause. The responses generated by the programs were also sometimes repetitive and unnatural. For example, while describing feeling of depression and sadness, it is not uncommon to receive the response of "I understand" many times in a row (Granello, 2000).

Although the Internet was created earlier, the 1990s saw a boom in the availability and interest of the Internet to the general public in the United States. Suddenly the population of people that readily had access to the Internet changed from a small elite to a large and growing cohort (Granello, 2000). Not only did this pave the way for new avenues of interpersonal communication such as chat rooms, message boards, and email, but clients and practitioners alike had unprecedented access to information about mental health. Inevitably, this lead to the conception of mental health treatment that could be delivered over the internet with or without direct clinician contact.

Methods of Delivery for Internet-Based Treatment

There are a variety of treatment types available through the Internet. It is helpful to categorize them by the intensity of contact with a clinician as well as by the synchronicity of

communication, as shown in Table 1. *Synchronous* communication involves a live, back-and-forth exchange between two or more individuals, which is characteristic of in-person conversation or instant text chatting. *Asynchronous* communication is marked by a delay in transmission between the communicating individuals such as that seen in traditional post or email. In their asynchronous Internet-based psychodynamic treatment of adults with depression, Johansson, et al. (2012) gave participants gradual access to self-help modules while providing therapist support via a secure email program throughout the treatment process. Similarly, Perini et al. (2008) developed an Internet-based treatment for major depression called the Sadness program. This treatment involves online lessons, weekly homework assignments and asynchronous weekly contact with mental health professionals through email. Another treatment called the Anxiety Program was developed by Titov et al. (2010) and is comprised of online lessons, homework assignments, reminder emails and asynchronous messaging contact with a clinician. A notable example of the synchronous model of treatment is Kessler et al.'s (2009) trial of Internet delivered psychotherapy for depression in which participants were administered 55-minute CBT sessions administered by therapists through real-time instant messaging. This is similar to the instant messaging based intervention provided though the website www.psychologyonline.co.uk, in which clients book and "attend" virtual text based psychotherapy sessions with a therapist over the Internet.

Finally, Internet-based psychotherapy models can be divided into interventions with a large degree of therapist involvement and those with relatively little involvement. Titov (2011) broadly defines *low intensity interventions* as those that involve less than three hours of total therapist contact and *high intensity interventions* as those that involve more than

three hours of contact. By nature, most interventions that include synchronous contact with

therapists in the form of live sessions are high intensity (Kessler et al., 2009). There are

some exceptions to this, because certain treatments involve shorter sessions and might total

less than three hours, thus qualifying as low intensity interventions (Andersson et al., 2005).

In some cases, self-guided therapy experiences can be combined with periodic synchronous

client-therapist interaction as a means of ensuring mastery of the lessons, while only

requiring a relatively small amount of therapist time (Van Straten, 2008). Interventions

involving asynchronous contact can also be categorized using this metric by indicating a

standard amount of time that clinicians are allotted to respond to online forum posts or send

response emails to clients (Wamerdam et al., 2008). Table 1 demonstrates how different

online treatments might fall within these different categories.

Table 1
Online Treatment Modalities

	Synchronous	Asynchronous
High Intensity	Real-time instant message therapy with long sessions (Kessler et al., 2009)	Self-help modules with extensive clinician feedback or forum participation (Perini, Titov, & Andrews, 2009)
Low Intensity	Real-time instant message therapy with brief sessions (Andersson et al., 2005)	Self-help modules with minimal clinician contact (Carlbring et al., 2012)

Empirical Support for Internet-Based Treatments

Although the field of Internet-based psychotherapy is in its infancy, the extant

literature on the topic suggests that it is efficacious. Titov (2011) reviewed 13 studies

investigating the effects of Internet-based psychotherapy for depression. This review

summarized the between-group effect sizes at post-treatment for both high and low intensity interventions that were either self-guided or therapist-guided. Results indicated that guided Internet-based interventions for depression are efficacious, as evidenced by within-group effect sizes in excess of 1.0 on measures of depression. This effect size is similar to that achieved through face-to-face psychotherapy and the results were typically sustained at follow up. Similar results were noted between high intensity guided interventions and low intensity guided interventions. This is in contrast to their findings on self-guided therapies, which suggest lower improvements than guided interventions and lower overall completion rates (Titov, 2011).

Kessler et al. (2009) completed a randomized controlled trial of an online therapist-delivered treatment for depression in a primary care setting. The authors noted that despite the demonstrated efficacy of online self-help treatments for depression, they remain inflexible and difficult to tailor to individual patient needs, which may contribute to low rates of adherence. The participants in this study were 297 individuals in primary care that were recruited from 55 general practices in the United Kingdom. To be included, participants had to be adults with a new episode of depression diagnosed within four weeks of the referral. The intervention consisted of up to ten 55-minute cognitive behavioral therapy (CBT) sessions delivered online and in real time by a therapist via instant messaging. Participants in the intervention group were more likely to have recovered from depression at four months follow up than were those in the control group (38% recovery in treatment group vs. 24% recovery in waitlist group, odds ratio = 2.39, $p = 0.01$). This finding also persisted at eight months follow up (42% recovery in treatment group vs. 26% in waitlist group, odds ratio = 2.07, $p = 0.02$). These results support the notion that Internet-

delivered psychotherapy for depression may be efficacious and feasible in a primary care setting.

In a follow up to their 2008 pilot study, Perini, Titov, & Andrews (2009) investigated the efficacy of an Internet-based intervention called the Sadness program. Participants were 45 Australian individuals who met diagnostic criteria for major depression and were randomly assigned to the Sadness program or a waitlist control group. Treatment consisted of six online lessons, homework assignments, participation in an online discussion forum, and regular email contact with a clinician. The online lessons were designed to represent principles used in CBT and were presented in the form of an illustrated story about a woman with depression who, with the help of her therapist, learns how to gain control over her symptoms. This intervention could be considered a high intensity, asynchronous treatment. Univariate ANCOVAs on post-treatment outcome measures for depression (PHQ-9 & BDI-II) showed that the treatment group had significantly lower post-treatment scores than the control group ($F(1, 42) = 0.73$, $p = 0.04$ for PHQ-9; $F(1, 42) = 6.01$, $p < .02$ for BDI-II). Additionally, at post-treatment, 41% of the treatment group participants were classified as recovered (a reduction of pre-treatment PHQ-9 scores of at least 50%), compared to 6% of the control group participants. These data provide additional support for the efficacy of therapist supported self-help programs delivered over the Internet.

In another randomized controlled trial, Johnston et al. (2011) examined the efficacy of a transdiagnostic Internet-based CBT program for anxiety disorders. Participants were 139 individuals living in Australia who met DSM-IV diagnostic criteria for generalized anxiety disorder, social phobia, or panic disorder. The treatment was referred to as the Enhanced Anxiety Program and included eight online lessons, homework assignments,

weekly telephone or email contact with the clinician and regular automated reminder emails. Weekly therapist contact was limited to 10 minutes, which resulted in a total of less than two hours per participant (low intensity). Univariate ANCOVAs revealed significant differences between the treatment group and the waitlist control group on seven separate outcome measures. Large between-group effect sizes were achieved in this comparison ($d = .81$). The results of this study illustrate that low intensity, asynchronous, guided CBT treatment delivered through the Internet may be effective in significantly reducing symptoms of anxiety.

In a randomized controlled trial, Blankers, Koeter, and Schippers (2011) compared the effectiveness of Internet-based therapy and Internet-based self-help for problematic alcohol users versus a waitlist (WL) control group. Participants were adults recruited through a substance abuse treatment center based in the Netherlands who scored over eight on the Alcohol Use Disorders Identification Test (AUDIT) and drank more than 14 standard drinks per week. The self-help group utilized a program based on CBT and Motivational Interviewing (MI). The program was developed in Adobe Flash and is a text-based interactive means for delivering lessons. Participants in the therapy group adhered to treatment that is based on the same CBT/MI protocol, but was extended to include synchronous text-based chat session with a therapist. These sessions lasted 40 minutes each. Planned pairwise comparisons indicated that both the therapy (T) and self-help (SH) conditions drank significantly less per week at three months follow-up than the waitlist group (WL $M = 35.5$ vs. T $M = 22.4$, $t(135) = 3.15$, $p = .002$; WL $M = 35.5$ vs. SH $M = 27.0$, $t(135) = 2.04$, $p = .03$). The difference between therapy and self-help groups was not significant at the three-month follow up (T $M = 22.4$ vs. SH $M = 27.0$, $t(134) = 1.24$, $p =$

.11). At six months, this difference was significant (T $M = 17.8$ vs. SH $M = 26.2$, $t(134) =$ 2.06, $p = .03$). In sum, these findings suggest that online self-help and online synchronous therapy may both significantly reduce problem drinking in adult alcohol abusers and that online therapy may be more effective at reducing problem drinking than online self-help over time.

Psychodynamic treatment is less commonly translated into Internet-delivered therapy, although it appears to be efficacious in some instances. Johansson et al. (2012) conducted a randomized controlled trial of a 10-week online psychodynamic guided self-help treatment for adult depression. The authors indicate that there is a population of individuals who prefer psychodynamic treatment over CBT, which is the more common online treatment at the moment. Participants were 92 adults from Sweden who were diagnosed with major depression. Participants were given gradual access to nine self-help modules as well as online support from a therapist as needed through a secure email service. The overall focus of treatment was on teaching the client how to recognize and break unhelpful affective, cognitive, and behavioral patterns. The individuals receiving psychodynamic treatment displayed continuous within-group improvements throughout the trial as measured by the BDI-II pre-treatment, post-treatment and at a 10-month follow up. The between groups effect size at post-treatment was large ($d = 1.11$). There was also a significant interaction effect of group and time on the BDI-II ($F(1, 110) = 37.2$, $p < .001$). Taken together, these findings show that guided self-help may be an effective treatment for depression and that it is possible to deliver this treatment over the Internet.

In an attempt to fortify the empirical support for online treatment of psychological disorders, Beattie et al. (2009) conducted a qualitative study investigating the expectations

and experiences of primary care patients involved in online cognitive behavioral therapy for depression. The authors note that a majority of people who are diagnosed with depression in the United Kingdom are treated within a primary care context, but claim that the availability of high-quality counseling within primary care is limited. To this end, the author sought to add to the body of literature investigating online psychological treatments within the primary care setting as an alternative to traditional options. The participants were 24 patients in England with depression who were involved in a parallel clinical trial of online CBT administered in real time by psychotherapists. The intervention was administered through the website psychologyonline.co.uk. Semi-structured interviews were conducted with participants in their homes, using a flexible topic guide. Pre-therapy interviews explored expectations of online CBT and post-therapy interviews examined actual experiences. Most participants accessed the online treatment from their home computer and found this to be a major advantage in terms of convenience and ability to schedule sessions into their daily lives. Prior to beginning therapy, many participants revealed negative expectations in regards to developing a therapeutic relationship with the clinician over the Internet and intuitively held a preference for face-to-face communication. However, after the treatment was completed, most were able to establish a good relationship and several reported being surprised at how quickly rapport was developed. Additionally, participants who felt more comfortable with writing down thoughts and feelings or communicating online in general had more positive expectations and reported outcomes. Also, many participants who had reservations about "typing instead of talking" were able to fully engage when treatment occurred. This research supports the idea that online psychotherapy may be an attractive option to consumers.

Overall, it is clear that the extant research on the subject of Internet-delivered mental health interventions indicates that treatments can be efficacious in treating a variety of psychological disorders. However, the field of online psychotherapy is still in its early stages and in the United States, Internet-based interventions are not yet widely considered to be empirically supported treatments. Regardless of the apparent benefits of online psychological treatment versus traditional face-to-face treatment, additional research is required to clarify the portrait of someone who might seek out Internet-based mental health treatment. In other words, who are the likely candidates for Internet-based psychological intervention?

Stage Model of Behavioral Research

Onken et al. (1997) proposed a stage model for behavioral therapies in recognition of the large burden placed on individual investigators who intend to conduct methodologically rigorous research. This model has three components that span the entire process from the initial clinical idea to late stage effectiveness research. Stage I consists of basic feasibility and pilot testing, development of manuals, creation of competence measures, and other aspects that are related to a novel clinical innovation. Stage II consists of randomized clinical trials (RCTs) to examine the efficacy of manualized or pilot tested treatments that demonstrate promise. Finally, Stage III consists of research designed to evaluate generalizability, implementation issues, consumer issues and other aspects related to the transportability of efficacious treatments. In Rounsanville, Carroll, & Onken's (2001) guide for moving past Stage I in behavioral research, the authors note that it is crucial to recognize that the scientific study of behavioral therapies does not finish with the completion of valid RCTs. Rather, Stage III is essential for the process of bridging the gap between research and

clinical practice. In order to move into Stage III, the treatment must have demonstrated efficacy in at least two RCTs. As demonstrated previously, there are many completed RCTs on various forms of Internet-based psychotherapy, which indicate that on the whole, it is an efficacious mode of treatment. However, it appears that the literature currently has little to offer in terms of information regarding the generalizability, feasibility, or desirability of Internet-based treatments. Now that RCTs have established that Internet-based therapies are efficacious, the next logical step is for the field to begin Stage III research to investigate the effectiveness and generalizability of such interventions.

The purpose of the present study is to identify which personality characteristics, symptom profiles, and personal aspects are related to a preference for Internet-based psychotherapy. This research will enable clinicians and future researchers to better understand which particular populations are more likely to have an interest and in Internet-based psychotherapy, since the current profile of an optimal patient for this new mode of intervention is largely unknown.

<div align="center">

Research Questions and Hypotheses

</div>

The primary objective of this study is to determine whether there is a particular subset of individuals who might be uniquely drawn to Internet-based psychotherapy. Based on prior research and theory, I explored the following hypotheses:

1.	Individuals who prefer either of the Internet-based approaches will be less extroverted than those who prefer face-to-face treatment.

2.	Individuals who prefer either of the Internet-based approaches will endorse a greater amount of anxiety and depression than those who prefer face-to-face treatment.

3.   Individuals who have had negative experiences with prior psychological

treatment will prefer Internet-based approaches over face-to-face therapy.

4.   Individuals who indicate an inability to consistently attend weekly appointments

will demonstrate a preference for Internet-based treatment over face-to-face

therapy.

5.   Individuals with negative attitudes toward receiving help from others will

demonstrate a greater preference for Internet-based approaches than face-to-face

treatment.

Method

Participants

Similar to other Internet researchers such as Balsam, Lehavot, Beadness, and Circo

(2010), I used targeted sampling as well as snowball sampling to gather participants.

Snowball sampling refers to the practice of encouraging participants to invite further

participation from their own personal networks. Participants were collected over the Internet

during a one month period starting March 14, 2014. I contacted initial participants for the

study through a variety of Internet-based means including direct email to personal

connections, posts on Facebook.com, Twitter.com, Linkedin.com and Youtube.com, as well

as posts to online message boards. Participants were given a direct link to the study and were

encouraged to share this link via social media with their own connections in order to

propagate the survey beyond the researcher's personal network. To facilitate this, the final

page of the survey contained three large "social sharing" buttons, which directed the

participants to share the survey link on Facebook, Twitter, or through email. In order to

participate in the study, participants were required to be United States residents over the age of 18. The first two questions in the survey were designed to screen out participants who did not fit this criteria, therefore any participants that indicated that they were under the age of 18 or did not reside in the United States were thanked for their interest and directed away from the survey.

In total, 3,388 individuals responded to the survey. 365 potential participants were screened out due to not being current residents of the United States. Of the remaining potential participants, 99 were screened out due to being under the age of 18. Additionally, many participants dropped out part way through the study. 90 participants discontinued the survey after completing the demographic portion and another 524 participants stopped responding prior to completing the questionnaires on personality, symptoms, and attitudes toward receiving help. These participants were not included in the analyses. Due to the fundamental importance of the ratings toward the end of the survey, which measured the participants' preferences regarding the three different treatment modalities, any participants who did not complete these items were not included in the analyses. The resultant sample contained 1404 individuals. The participants reported being predominantly female (n = 844, 60%) and European-American (n = 1058, 75%). The mean reported age of the participants was 27.70 (SD = 8.73). 33% of participants (n = 468) had completed some college coursework and 57% (n = 802) lived in a suburban area. There were no significant differences between gender (χ^2(2, N = 1398) = 2.73, p = .26) or ethnicity (χ^2(7, N = 1404) = 4.69, p = .70) groups in terms of overall preference for Internet-based versus face-to-face approaches. Compared to the subset of the sample who completed the introductory portion of the survey, but did not continue into the questionnaires, the final sample did not differ

greatly in terms of demographics. The group that dropped out had a slightly lower mean age

of 24.54, were evenly split in terms of gender, had a similar distribution of education level,

and were predominantly European-American (71%).

Instruments

   Background Information. I gathered extended demographic information about

participants through a self-report questionnaire. This portion of the survey asked participants

to provide their age, ethnicity, level of education, ability to attend meetings, number of

individuals in the household, and approximate household income. Participants were also

asked about their history of psychological and psychopharmacological treatment. Finally,

participants provided information about their current computer and Internet use.

   Personality Factors. I used the Big Five Inventory (BFI) to achieve a basic

understanding of each participant's personality characteristics. The BFI (John & Srivastava,

1999) is a 44-item measure of five basic personality factors: Neuroticism, Extraversion,

Openness, Agreeableness, and Conscientiousness, collectively referred to as the "big five."

It is a self-report assessment in which individuals are asked to indicate the extent to which

they agree or disagree with statements about themselves, using a five-point Likert scale. The

assessment takes approximately five minutes to complete and has sound psychometric

properties. In adult samples, the BFI has demonstrated high internal consistency, adequate

retest reliability, and strong convergence with other measures of the Big Five traits (Benet-

Martinez & John, 1998; John & Srivastava, 1999). Research has also shown a high degree of

agreement between self and peer-reports using the BFI (DeYoung, 2006, Rammstedt &

John, 2007).

Symptoms. The Self-Rating Anxiety Scale (SAS; Zung, 1971) is a 20-item self-report measure designed to measure commonly found characteristics of anxiety disorders, including five affective and 15 somatic symptoms. Each item is rated on a four-point Likert scale indicating the degree to which each item applies to the rater during the past week. The SAS is scored by summing the values on each item to produce a total raw score ranging from 20 to 80. The author suggests a cutoff score of 50 for detecting the presence of clinically meaningful anxiety. The original literature indicates significant correlations with the Taylor Manifest Anxiety Scale (Taylor, 1953) and with a companion scale designed for clinician ratings of patient anxiety (Zung, 1971). In two subsequent studies with college age samples, Cronbach's coefficient alphas were both .82 (Tanaka-Matsumi & Kameoka, 1986; Wu & Wei, 2008). The internal consistency for the SAS responses in the present study as measured by Cronbach's alpha was .89, which represents good consistency.

The Self-Rating Depression Scale (SDS; Zung, 1965) is a 20-item instrument designed to investigate three dimensions of depression: pervasive affect, physiological concomitants, and psychological concomitants. Each item is rated on a four-point Likert scale indicating how often each symptom applies to the rater. The SDS is scored by summing the values from each item to generate a raw score ranging from 20 to 80. Zung suggests that individual items as well as overall scores are considered meaningful and indicates the following cutoff scores: 50-59 (mild to moderate), 60-69 (moderate to severe), and 70 and over (severe). The SDS has been shown to have adequate psychometrics in the original literature (Zung, 1965), with a split half reliability of .73, and good concurrent validity with other depression measures such as the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Another study of the SDS with an elderly

population demonstrated a high internal consistency of .84 (Dunn & Sacco, 1989). The Cronbach's alpha for the SDS responses of the present study was .87, which indicates good internal consistency.

These basic symptom measures are not intended to serve a diagnostic function. They were used to understand the general symptomatic patterns of depression and anxiety that are present in the sample and to serve as a basis for comparison between groups.

Likelihood to Seek Help. The Network Orientation Scale (NOS; Vaux, Burda & Stewart, 1986) is a 20-item instrument designed to measure a construct called negative network orientation, which refers to the perspective that it is useless, risky, or unwise to seek help from others. An important aspect of the NOS is that it does not focus on an individual's lack of social support as a phenomenon, but rather their unwillingness to maintain or utilize these supports. In other words, the individual may have a large and supportive personal network, but may harbor a personal belief that they should not rely on it. The NOS was initially developed initially four college age and one community adult sample. Each of these samples were ethnically and culturally varied. The NOS has demonstrated good internal consistency, with mean alpha of .74 and test retest correlations of .85, .87, and .81 for one-, two-, and three-week intervals, respectively. Negative network expectations have been shown to correlate with reports of less available network supports and more negative appraisals of support (Vaux, Burda & Stewart, 1986). The Cronbach's alpha for the NOS responses from the present study was .84, which can be considered good internal consistency.

Therapy Impressions. I measured participants' therapy impressions by instructing them to view three short video vignettes, each depicting a different type of therapy, and then

19

asking them to respond to self-report items that were intended to measure the participant's

preferences and impressions of each therapy type. The videos were hosted privately on

Youtube (http://bit.ly/186mkQJ) and feature a young woman named Jenny. Jenny was

presented as an apparently Caucasian female in her mid 30s in a heterosexual marriage with

multiple children. The three vignettes consist of a sequence of color illustrations depicting

Jenny engaging in one of the three therapeutic modalities along with a voice-over describing

the situation. In all of the vignettes, Jenny suffers from the same presenting issue, though

each is worded slightly differently. The transcripts for the voice overs are included in the

appendices.

Each vignette was embedded in a separate page of the survey, which asked the

participants to, "Please watch the following video before answering the questions below."

The text-based Internet psychotherapy vignette depicted Jenny getting home from

somewhere in her car, greeting her dog at the door upon entering home, excusing herself

from the dinner table where she is sitting with her family, and sitting on the couch with her

laptop. An example instant message was also shown on the screen of the computer in which

Jenny's therapist begins the session by asking her about a previously mentioned evaluation

at work. The final scene in the text-based Internet psychotherapy vignette was a picture of

the secure transaction service where Jenny pays for her session. The guided self-help

vignette depicted Jenny going to a coffee shop and ordering coffee, sitting down with her

laptop at a table, completing an online module titled, "Anxiety Scheduling," emailing her

homework to her therapist, and finally paying through the same secure transaction service.

The traditional psychotherapy vignette showed Jenny walking into a psychotherapist office,

sitting in the waiting room, being greeted by her therapist, sitting down to talk with her

therapist in a private office, and finally paying for her session by credit card. I decided to include the depiction of Jenny paying for her treatment by credit card or through the secure transaction service in order to illustrate that the three approaches were equivalent in their value. In other words, to demonstrate that the Internet-based approaches were not held to a lower standard than the face-to-face treatment. It is possible that financial status might have influenced participant ratings of the different approaches if one was perceived to be less expensive. Below each of the video vignettes, participants were asked to rate five Likert scale ratings indicating their opinions of the therapeutic modality presented on that page.

Procedures

Participants were given a direct web link to the survey. Upon beginning the survey, individuals first encountered two screening questions to determine whether they were over the age of 18 and whether they currently resided in the United States. If they responded "no" to either of these screening questions, they were directed to a page that thanked them for their interest in participating and explained that they are ineligible to take part in the study. If the participant was eligible to participate in the study, they were directed to a page that detailed information about the Amazon gift card giveaway. Participants were informed that they could participate in the giveaway regardless of their participation in the survey and that they could find the instructions for participation on the final page of the survey. An online consent form was used within the survey that detailed the aims and expectations of the study as well as their rights as a participant. The participants were told that advancing to the next page signified informed consent and no physical signatures were collected.

The demographic and background questions were presented on the two pages following the consent form. Following this, the participants responded to the questions of

the BFI, NOS, SAS, and SDS in that order. Each questionnaire was contained on a separate page and participants were able to skip any questions that they did not want to answer. After the questionnaires, the video vignettes were presented along with their Likert scale ratings each on a separate page, followed by a page asking for the participants to rank order their preference for each of the three psychotherapy approaches. The final two pages of the survey contained large graphic links to promote sharing the survey on Facebook, Twitter, or through email, and finally the instructions for participating in the giveaway.

Results

Data Cleansing

In addition to screening a portion of the total respondents due to dropping out part way through the survey, I also cleansed the data in order to manage extreme responding and missing items. Upon analysis, there were no instances of extreme responding aside from those who did not answer a single item for a given section of the survey. Extreme responding was defined as responding identically to every single item of a scale or responding in a way that resulted in a clear outlier value on any section of the survey.

For missing data in the BFI, NOS, SAS, and SDS portions of the survey, I used the approach suggested by John (2009) in which any participant missing more than six items on a given scale is not included in the analysis. For those participants who are missing six or less items, John suggests substituting in the score from the closest synonym item for each missing item. For example, if a participant omitted a response for the BFI item "…is relaxed, handles stress well," I substituted in their score from the item "...remains calm in tense situations." Some respondents had missing values for both the primary item in question as well as its most similar synonym. For these instances, I used the next

approximate synonym item. In the presented example, the next approximate synonym would be the reverse score of "…can be tense." I used this approach for each of the aforementioned inventories. Interestingly, the results of the analyses below were not substantively different between the cleansed and uncleansed data.

Analysis Results

I used one-way ANOVAs and Tukey's HSD to determine differences between groups in terms of the dependent variables. The participants rank ordered their preference for the three psychotherapeutic approaches at the end of the survey. The participants' first ranked modality was used as a grouping variable to perform the ANOVAs. Therefore one group consisted of all of the participants who ranked face-to-face psychotherapy first ($n = 817$), one consisted of all of the participants who ranked text-based Internet psychotherapy first ($n = 300$), and one consisted of all of the participants who ranked online guided self-help first ($n = 287$). The results of these analyses are shown in Table 2.

Table 2

One-Way Between Group Analyses of Variance with Post-Hoc Contrasts and Effect Size

	Face-to-Face M(SD)	*Text-Based* M(SD)	*Self-Help* M(SD)	*F*	*Contrasts*
Extroversion	**24.66(7.08)**	**21.70(6.72)**	**21.84(6.76)**	**28.95******	**F > T ($d = 0.42$)** **F > S ($d = 0.40$)**
Agreeableness	33.69(5.50)	33.13(5.96)	32.50(5.65)	3.94*	F > S ($d = 0.19$)
Neuroticism	25.35(6.68)	26.97(6.30)	25.25(6.62)	7.35***	T > F ($d = 0.25$) T > S ($d = 0.27$)
Conscientiousness	31.24(6.02)	30.33(6.16)	31.10(5.60)	2.53	
Openness	37.57(5.85)	37.29(5.89)	36.82(5.97)	1.76	
SAS	38.29(9.76)	41.60(10.14)	38.97(10.06)	12.33***	T > F ($d = 0.33$) T > S ($d = 0.26$)
SDS	41.50(9.93)	45.38(10.14)	43.35(10.35)	17.10***	T > F ($d = 0.39$) S > F ($d = 0.18$)
NOS	**43.39(7.35)**	**46.58(7.68)**	**47.41(7.46)**	**40.66******	**T > F ($d = 0.42$)** **S > F ($d = 0.54$)**
Treatment Satisfaction	**3.73(0.97)**	**2.92(1.02)**	**3.01(0.95)**	**48.84******	**F > T ($d = 0.82$)** **F > S ($d = 0.75$)**
Meeting Ability	**3.86(1.24)**	**3.34(1.37)**	**3.31(1.37)**	**28.43******	**F > T ($d = 0.40$)** **F > S ($d = 0.42$)**

*p < .05. **p < .01. ***p < .001.
Bold indicates moderate or higher effect size.
F = Face-to-face preferred. T = Text-based preferred. S = Self-help preferred. SAS = Self-Report Anxiety Scale. SDS = Self-Report Depression Scale. NOS = Network Orientation Scale.

I used one-way between-group ANOVAs to compare mean scores on the basic personality dimensions of the BFI: Extraversion, Agreeableness, Conscientiousness, and Openness to experience. I hypothesized that participants who preferred the two Internet-based approaches would demonstrate a lower degree of Extraversion compared to those who preferred face-to-face therapy. No other hypotheses were generated regarding the personality dimensions, but I analyzed them in an exploratory fashion. The overall F for the one-way ANOVAs were statistically significant for Extraversion, $F(2, 1401) = 28.95$, $p < .01$, Agreeableness, $F(2, 1401) = 3.94$, $p = .02$, and Neuroticism, $F(2, 1401) = 7.35$, $p < .01$. Conscientiousness, $F(2, 1401) = 2.53$, $p = .08$, and Openness, $F(2, 1401) = 1.76$, $p = .17$, were not significant.

Due to inflation in statistical significance based on the relatively large sample size of this study, effect sizes (Cohen's d) were interpreted rather than relying on p values alone. To be seen as meaningful, variables in this study needed to meet the cutoff for moderate effect size ($d = 0.40$) set by Cohen (Cohen, 1977). All possible pairwise comparisons were made using the Tukey's HSD test. Based on this test (using $\alpha = .05$), I found that for Extraversion, the face-to-face group had significantly higher scores than both the online self-help ($d = 0.42$) and text-based Internet therapy groups ($d = 0.40$). There was no significant difference between the two online approaches. For Agreeableness, the face-to-face group demonstrated significantly higher scores than the online self-help group ($d = 0.19$). The text-based psychotherapy group reported significantly higher Neuroticism scores than the face-to-face ($d = 0.25$) and online self-help ($d = 0.27$) groups. No other group differences were found among the BFI scores.

I also used one-way between-group ANOVAs for the symptom inventories with the same first ranked modality grouping variable. The overall F was significant for both the Self-Rating Anxiety Scale, $F(2, 1401) = 12.33$, $p < .01$, and the Self-Rating Depression Scale, $F(2, 1401) = 17.10$, $p < .01$. Tukey's HSD revealed that the text-based group demonstrated significantly higher overall anxiety scores than the face-to-face group on the SAS ($d = 0.33$) and higher anxiety scores than the self-help group ($d = 0.26$). No significant differences in anxiety scores were demonstrated between the face-to-face and self-help groups. For depression, the two online groups, text-based ($d = 0.39$) and self-help ($d = 0.18$), reported significantly higher scores on the SDS than the face-to-face group. No significant differences were observed between the two Internet-based groups. Nearly all of these results were in the hypothesized direction.

I also analyzed the remaining dependent variables, Negative Network Orientation, satisfaction with previous treatment, and ability to regularly attend meetings, using one-way between-group ANOVAs and Tukey's HSD. The overall F for the NOS was significant, $F(2, 1401) = 40.66$, $p < .01$. Tukey's HSD revealed that the groups for both Internet-based approaches reported significantly higher negative network orientation ($d = 0.42$ for text-based, $d = 0.54$ for self-help) as compared to the face-to-face group, which was in line with hypotheses. There was no significant difference between the text-based and online self-help groups in regards to NOS scores. The overall F for satisfaction with previous treatment was also significant for those individuals who indicated that they have had previous mental health treatment $F(2, 1401) = 48.84$, $p < .01$. Tukey's HSD indicated that the groups that preferred one of the two online approaches rated a significantly lower degree of satisfaction with previous psychological treatment ($d = 0.82$ for text-based, $d = 0.75$ for self-help) and

the groups that preferred either one of the online approaches did not differ significantly from each other. For ability to attend meetings, the overall F was also significant, $F(2, 1401) = 28.43$, $p < .01$. Tukey's HSD revealed a similar pattern. The groups for the two online approaches demonstrated significantly lower ability to attend meetings than the face-to-face group ($d = 0.40$ for text-based, $d = 0.42$ for self-help) and there were no significant differences between the two online groups.

To further support the results indicated by the ANOVA analyses, I performed binary logistic regression on the data. Instead of using three different groups as in the ANOVA analyses, I combined the groups that preferred the text-based Internet therapy and online self-help modalities with the intention of investigating people who prefer Internet based treatment as a whole versus those who prefer traditional psychotherapy. I elected to combine the groups together since there were very few significant differences on any variables between either of the Internet-based groups. Among the few differences that did exist, none had at least moderate effect sizes, which indicates that the differences may not be meaningful. Combining the groups also helped to balance the sample size between the two groups in this analysis. Selected variables were entered in a single block using the forward conditional setting. Participant income, ethnicity, and education were entered as categorical variables into the model. Age, gender, ability to attend meetings, total internet use, BFI personality traits, Network Orientation Scale, Self-Report Anxiety Scale, and Self-Report Depression Scale were also included in the model. Although the variable measuring satisfaction with previous psychological treatment was found to be significantly different between the preference groups, it was not included in this portion of the analysis because many participants had not previously participated in psychotherapy and inclusion of the

variable would greatly reduce the sample size for this analysis. Table 3 shows the results of the binary logistic regression.

Table 3

Binary Logistic Regression Analysis Predicting Preference for Internet-Based Treatment

Block	Step	Source		*B*	*SE B*	*Wald*	*p*
					Statistics at Entry		
1	1	Network Orientation Scale		-.07	.01	69.82	<.01
	2	Network Orientation Scale		-.07	.01	56.68	<.01
		Meeting Ability		.28	.05	39.53	<.01
	3	Network Orientation Scale		-.05	.01	30.71	<.01
		Meeting Ability		.28	.05	38.31	<.01
		Extraversion		.05	.01	19.05	<.01

Entry of all included variables resolved in three steps. In the first step, Network Orientation Scale entered into the model and was significantly able to predict preference for Internet-based treatment, $\chi^2(1, N = 1324) = 75.45$, $p < .01$. Ability to attend routine in-person meetings entered in the second step and was significantly able to predict group membership, $\chi^2(1, N = 1324) = 40.37$, $p < .01$. In step three, extraversion entered into the model. After step three, the variables resulted in a significant classification of observed versus expected cases, $\chi^2(3, N = 1324) = 135.17$, $p < .01$. Nonsignificant statistics for the Hosmer-Lemeshow goodness-of-fit test (Hosmer & Lemeshow, 2000) for the final model, $\chi^2(8, N = 1324) = 10.69$, $p = 0.22$, indicated a good fit to the data. Because there is no equivalent statistic to R or R^2 for logistic regression, there are several "pseudo Rs" provided in the analysis, which are meant to serve as placeholders for a true R calculation. However, Hosmer and Lemeshow (2000) advise against interpretation of pseudo R or R^2 and instead base interpretation solely on comparison of observed to predicted values. In this case, the overall classification rate was 64.0%. Though this model represents a good fit to the data and a

significant level of classification, it is important to note that the purpose of this study is not to predict group membership based on these characteristics. Rather, the logistic regression was included in a post-hoc manner to further support the results from one way ANOVAs and bolster the conclusion that the hypothesized factors are indeed related to a preference for internet-based psychological treatment.

Discussion

Impact of Present Research

Internet-based psychotherapeutic treatment is a reality. There is a growing population within the United States that is currently receiving therapy without ever meeting face-to-face with their clinicians. Between the simple truth that Internet-mediated communication has become a daily standard for most Americans and the growing body of evidence that supports the efficacy of Internet-based approaches to treating psychological disorders, it is vital to understand as much as possible about this uniquely modern approach (Purcell, 2011; Kessler et al, 2009; Titov, 2011). With the recent push to demonstrate empirical support for online forms of therapy, an important aspect of research has thus far been neglected. In behavioral research, it is important to bridge the gap between the determination of efficacy through RCTs and issues such as effectiveness and implementation. This research represents an attempt to begin the process of exploring this "phase III" research, which investigates the practicality and consumer issues related to implementing online interventions (Onken et al., 1997). In particular, this research investigated the factors that related to a preference for Internet-based approaches to psychotherapy.

I predicted that individuals who prefer online approaches would be different from those who prefer traditional psychotherapy in several key ways. Nearly all major hypotheses

were supported by the data of this study. In the end, there were four factors that were most clearly related to a preference for Internet-based treatment. Among those who have had previous psychotherapy, the largest effect was observed was with regards to their opinions of that treatment. That is, participants who had the perception that previous treatment was not helpful preferred online treatment to traditional therapy. Across all participants, degree of extraversion, skepticism toward receiving help from others, and ability to regularly attend in-person meetings were most predictive of a preference for Internet-based mental health treatment. It is important to note that the measure of skepticism toward receiving help (NOS) is different than a measure of social introversion. These individuals may or may not have a large social support network. The instrument is meant to measure their opinion of receiving help from that network. The hypothesis that participants who preferred Internet-based treatment would indicate a greater amount of depression and anxiety was partially supported, as the differences between groups were significant, but these differences were small in effect size.

All of these results were in line with hypotheses and paint a picture of a population with legitimate barriers to traditional psychotherapy. Internet-based approaches seem to appeal to those who are so introverted that traditional help-seeking behaviors such as calling, making an appointment, traveling to an office, waiting for session to start, and speaking directly to a professional in-person may be prohibitive in and of themselves. Prior research has demonstrated that higher extraversion is associated with greater likelihood of seeking support for psychological issues (Amirkhan, Risingher, & Swickert, 1995). In one other study, Tsan (2007) discovered that level of extraversion was a predictor of online counseling use. These individuals also might be people who have had negative experiences

with traditional approaches to therapy or have negative attitudes about being helped by others in general. This is useful information, since attitudes and expectations toward psychotherapy are widely considered to be an important contributor to change in treatment (Wampold et al., 1997). Perhaps online approaches could serve as a helpful "work around" for individuals who are currently experiencing strong symptoms but are limited by their attitudes toward traditional treatment. They also appear to be useful for those who are unable to easily attend in-person meetings on a regular basis. In this study, the reasons for participants' inability to attend meetings were not determined, but there are several groups of consumers that might uniquely benefit from this aspect of online treatment. Most intuitively, clients who are non-ambulatory could certainly benefit from the ability to access routine, non-emergency care from their own homes. This may also be beneficial for clients who are required to travel at a near-constant rate. Touring musicians, speakers, actors, athletes, or entrepreneurs would be able to achieve a degree of consistency with psychological treatment that might not otherwise be available when limited to face-to-face meetings with the same clinician.

Few differences were revealed between the Internet-based psychotherapy and online self-help groups. This might imply that regarding client preference, the particular techniques used to provide mental health interventions are less important than whether the intervention is online or face-to-face. It is crucial to note that this does not indicate that the two approaches are equivalent in their efficacy or clinical impact, but rather that there are similar populations of individuals that would prefer either one of the presented non-traditional modalities.

Ethical Implications

Though the present research did not investigate the ethical implications associated with providing online psychological help, it is an important topic to discuss. Lee (2010) identified several unique ethical challenges facing those who engage in Internet-based psychological treatment. It is vital to discuss the risks of engaging in online treatment during the informed consent process due to the unique difficulty of emergency care in the event of psychiatric crises. The International Society of Mental Health Online suggests that therapists develop appropriate plans with clients for possible emergency procedures, obtain proper contact information that can be used to notify officials if a crisis arises, and locate alternative mental health professionals that are local to the client that can be accessible to the client if needed (Hsiung, 2001). Privacy and confidentiality are also ethical risks that should be addressed in Internet-based treatment. It is important to clearly establish the risks involved in transmitting confidential information over the internet, as that information can be compromised if not secured properly (Mallen et al., 2005). In recent years, more secure means of Internet-based communication have been established that provide greater protection from potential compromise as compared to typical consumer level programs such as Skype or Gmail. Telehealth.org maintains a list of programs and companies that claim encrypted, HIPAA compliant video or text chat programs that should be used when possible to further protect confidential patient information.

Targeted Marketing

Current research indicates that marketing psychological interventions directly to potential clients may have a positive impact on their attitudes toward psychological treatment and their likelihood to seek help (Gallo et al., 2015). Until recently, direct

marketing to consumers was common for psychopharmacological treatments of mental illness, but relatively rare for psychotherapy or other forms of psychological intervention. Instead, the majority of efforts to advance the utilization of evidence supported psychological treatments have been directed toward mental health providers, which leaves a large proportion of consumers left unaware of the potential benefits of these approaches (Gallo, Comer, & Barlow, 2013). Several recent initiatives, such as the Real Men, Real Depression campaign, developed by the National Institute of Mental Health, have attempted to use direct marketing to consumers to promote awareness of psychological issues and available resources to populations that are characteristically resistant to help-seeking behaviors due to perceived stigmatization (Rochlen & Hoyer, 2005). Cohn and Hastings (2013) also advise mental health professionals who wish to establish practices in rural areas to carefully consider the specific population that they would like to work with and directly market to them approaches that fit with their unique characteristics.

The vast power and capabilities of targeted marketing over the internet are currently growing at a rapid rate. The use of Google AdWords for direct marketing has already been shown to be effective in recruiting participants for a variety of research studies with specific inclusion criteria (Heffner et al., 2013; Jones, Goldsmith, Hewson, & Williams, 2013). With the prevalence of social media and commonly used websites gathering personal information for marketing purposes, there is an unprecedented opportunity to specifically target advertisements to people who represent populations that might be less likely to seek out psychological help through traditional face-to-face channels. The results of this study may provide unique insights that can be used to disseminate information about Internet-based

approaches to psychological treatment to individuals that are likely to prefer it over face-to-face treatment.

Limitations

There are some notable limitations to this study that must be considered. Though the sample for this study was large, it may be biased in some regards. Participants were initially recruited from my extended personal and professional networks. From there, the survey spread through social media and email, as participants were invited to share the survey with others. In this way, the sample for this study is a snowball sample derived from an initial convenience sample. It is possible that some systematic homogeneity persisted within the sample and was reflected in the data. Additionally, the method of grouping the participants for analysis may have some limitations. Participants were grouped by their first ranked preference from the different modalities of treatment presented in the video vignettes for the ANOVA analyses. This forced choice may have created a somewhat artificial division among participants who may have preferred two or more modalities quite similarly. Also, no manipulation check was included to determine whether participants finished watching each of the therapeutic modality video vignettes. Therefore, it is possible that some participants relied on their own preconceptions in rating the modalities rather than information gleaned from the vignettes.

The video vignettes depicting the different approaches to psychological treatment each depicted a woman with specific demographics. It is possible that the depiction of a young adult Caucasian woman in a heterosexual relationship with children may have had an impact on levels of preference among multicultural participants. If present, this effect should have been present across each modality presented, since each of the vignettes depicted the

34

subject in a similar fashion. As such, it is unlikely that a lack of cultural identification with the character contributed significantly to a difference between preferences for each of the approaches. Regardless, it is important to keep in mind the effect of cultural identification in the perception of mental health services. Since ethnic similarity has been shown to play a role in individual perception of therapy effectiveness, it may be important for future studies to include a variety of cultural presentations in visual vignettes (Atkinson, 1983).

Conclusions and Future Directions

Despite these limitations, the implications from this study should not be understated. This research represents an early attempt to identify the types of individuals that might be interested in Internet-based forms of mental health treatment. The insight that this study could provide is helpful in several regards. As in other parts of the world, the United States may see the eventual integration of Internet-based treatment into primary care. If this were the case, physicians would benefit from a clearer picture of the ideal candidate when determining whether to refer a patient to traditional therapy or to online approaches. This would allow an additional level of care to offer to those patients who might be at a precontemplative level of readiness for change (Prochaska, DiClemente, & Norcross, 1992). In the same way, these additional options could serve as a sort of "bargaining chip" with patients who might have outright opposition to psychological help due to personal factors, previous experience, or environmental stigmatization.

Knowing the types of people that are likely to engage in online psychological treatment could also be beneficial in aiming marketing directly to potential consumers. Further, it might be possible to use the powerful demographic targeting tools available through resources such as Facebook advertising or Google AdWords to better reach

individuals who might be particularly well suited to Internet-based approaches, "on their own turf." That is, on the Internet. Based on the results from this study, these individuals might be primarily introverted, with negative attitudes toward treatment and receiving help from others. Engaging with them through Internet-based marketing might be a helpful avenue for providing modern psychological treatment to a population that might not otherwise receive help. This process of "meeting" the client, combined with the inherent differences between Internet-based and traditional psychotherapy, could serve to counteract some of the factors that serve as existing barriers to seeking and engaging with psychological treatment.

Internet-based modes of treatment may also provide an unparalleled avenue for providing consistent and efficacious mental health treatment to individuals who are not in a position to attend ongoing sessions in the same geographic location. Members of the armed forces, business executives, actors, professional athletes, and touring musicians are a few populations that might uniquely benefit from routine access to treatment that does not require regular in-person meetings. Additionally, the two Internet-based models presented in this study do not require a video connection. Video chatting could be prohibitive in areas that do not have strong Internet coverage due to the intensive network requirements of streaming video. Though online psychotherapeutic treatment appears to be on-par with traditional psychotherapy in most studied cases, there is a chance that online approaches may provide a higher standard of care for individuals from these populations due to the added benefit of consistency regardless of geographic location. Further research is required to investigate this possibility.

Currently, this study represents one of the first explicitly designed to investigate which populations are likely to prefer the non-traditional approaches of Internet-based psychotherapy and online guided self-help over traditional psychotherapy. Ideally, this research is an early iteration in a growing body of literature that sheds light on this topic. Future research should include a qualitative component to more fully understand the subjective factors that play a role in preference for these non-traditional forms of treatment. It would also be advantageous to pursue randomized trials that directly compare online and offline versions of therapy in a head-to-head fashion. Currently, the majority of research appears to examine whether Internet-based approaches meet similar efficacy criteria as traditional approaches, but there are relatively few that seek to determine which type of treatment is more effective for a given population.

Logic dictates that Internet-based mental health treatment will likely continue to rise in popularity over the coming years. Given this trend, it is vital to understand as much as possible about this groundbreaking avenue of providing individual psychological treatment. While there remains much research to be completed, this study provides strong evidence for the existence of unique subsets of the population that are likely to prefer Internet-based treatment over traditional face-to-face therapy.

References

Amirkhan, J., Risinger, J., & Swickert, R. (1995). Extraversion: A "hidden" personality

    factor in coping? *Journal of Personality, 63*(2), 189-212. http://dx.doi.org

    .proxy.library.ucsb.edu:2048/10.1111/j.1467-6494.1995.tb00807.x

Andersson, G. (2006). Using the Internet to provide cognitive behavior therapy. *Behaviour*

    Research and Therapy, 47(3), 175-180. http://dx.doi.org/10.1016/j.brat.2009.01.010

Andersson, G., Bergstrom, J., Hollandare, J, et al. (2005) Internet-based self-help for

    depression: Randomized controlled trial. *British Journal of Psychiatry, 187*(5), 456-

    461. http://dx.doi.org/10.1192/bjp.187.5.456

Andersson, E., Walen, C., Hallberg, J., et al. (2011). A randomized controlled trial of guided

    Internet-delivered cognitive behavioral therapy for erectile dysfunction. *Journal of*

    Sexual Medicine, 8, 2800-2809. http://dx.doi.org/10.1111/j.1743-6109.2011.02391.x

Andrews, G., Creamer, M., Crino, R., Hunt, C., Lampe, L., & Page, A. (2003). *The*

    treatment of anxiety disorders: Clinician guides and patient manuals (2nd ed.)

    Cambridge University Press, New York, NY. Retrieved from

    http://search.proquest.com/docview/620087929?accountid=14522

Atkinson, D. (1983). Ethnic similarity in counseling psychology: A review of research. *The*

    Counseling Psychologist, 11(3), 79-92. http://dx.doi.org.proxy.library.ucsb.edu:2048

    /10.1177/0011000083113009

Balsam, K., Lehavot, K., Beadnell, B., & Circo, E. (2010). Childhood abuse and mental

    health indicators among ethnically diverse lesbian, gay, and bisexual adults. *Journal*

of Consulting and Clinical Psychology, 78(4), 459-468. http://dx.doi.org/10.1037/a0018661

Beattie, A., Shaw, A., Kaur, S., & Kessler, D. (2009). Primary-care patients' expectations and experiences of online cognitive behavioral therapy for depression: a qualitative study. *Health Expectations, 12*, 45-59. http://dx.doi.org/10.1111/j.1369-7625.2008.00531.x

Beck, A., Ward, C., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*(6), 561-571. http://dx.doi.org/10.1001/archpsyc.1961.01710120031004

Benet-Martinez, V. & John, O. (1998). Los cinco grandes across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English. *Journal of personality and Social Psychology, 75*, 729-750. http://dx.doi.org/10.1037/0022-3514.75.3.729

Bennett-Levy, J., Richards, D., Farrand, P., et al. (Eds). (2010). *Oxford guide to low intensity CBT interventions.* New York: Oxford University Press. Retrieved from http://search.proquest.com/docview/853490025?accountid=14522

Blais, R. & Renshaw, K. (2014). Self-stigma fully mediates the association of anticipated enacted stigma and help-seeking intentions in National Guard service members. *Military Psychology, 26*(2), 114-119. http://dx.doi.org/10.1037/mil0000036

Blankers, M., Koeter, M., & Schippers, G. (2011). Internet therapy versus Internet self-help versus no treatment for problematic alcohol use: A randomized controlled trial.

Journal of Consulting and Clinical Psychology, 79(3), 330-341. http://dx.doi.org /10.1037/a0023498

Carlbring, P., Apelstrand, M., Sehlin, H., et al. (2012). Internet-delivered attention bias modification training in individuals with social anxiety disorder – A double blind randomized controlled trial. *BMC Psychiatry, 12*(66). http://dx.doi.org/10.1186 /1471-244X-12-66

Clark, G., Kelleher, C., Hornbrook, M., et al. (2009). Randomized effectiveness trial of an Internet, pure self-help, cognitive behavioral intervention for depressive symptoms in young adults. *Cognitive Behavior Therapy, 38*, 222-234. http://dx.doi.org/10.1080 /16506070802675353

Cohen, J. (1977). Statistical power analysis for the behavioral sciences. New York: Academic Press. Retrieved from http://search.proquest.com/docview /617353861?accountid=14522

Cohn, T. & Hastings, S. (2013). Building a practice in rural settings: Special considerations. *Journal of Mental Health Counseling, 35*(3), 228-244. Retrieved from http://search.proquest.com.proxy.library.ucsb.edu:2048/docview/1449318356 ?accountid=14522

Colby, K., Watt, J., & Gilbert, J. (1966). A computer method of psychotherapy: Preliminary communication. *Journal of Nervous and Mental Diseases, 142*, 148-152. Retrieved from http://search.proquest.com/docview/615463420?accountid=14522

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist, 59*, 614-625. http://dx.doi.org/10.1037/0003-066x.59.7.614

DeYoung, C. (2006). Higher-order factors of the Big Five in a multi-informant study. *Journal of Personality and Social Psychology, 91*, 1138-1151. http://dx.doi.org /10.1037/0022-3514.91.6.1138

Gallo, K., Comer, J., & Barlow, D. (2013). Direct-to-consumer marketing of psychological treatments for anxiety disorders. *Journal of Anxiety Disorders, 27*, 793-801. http://dx.doi.org/10.1016/j.janxdis.2013.03.005

Gallo, K., Comer, J., Barlow, D., Clarke, R., & Martin, M. (2015). Direct-to-consumer marketing of psychological treatments: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 1*, 1-5. http://dx.doi.org/10.1037/a0039470

Granello, Paul. (2000). Historical context: The relationship of computer technologies and counseling. In J. Bloom & G Walz (Eds.), *Cybercounseling and Cyberlearning: Strategies and Resources for the Millennium* (3-13). Alexandria: American Counseling Association. Retrieved from http://search.proquest.com/docview /619455495?accountid=14522

Heffner, J., Wyszynski, C., Comstock, B., Mercer, L., & Bricker, J. (2013). Overcoming recruitment challenges of web-based interventions for tobacco use: The case of web-based acceptance and commitment therapy for smoking cessation. *Addictive Behaviors, 38*(10), 2473-2476. http://dx.doi.org.proxy.library.ucsb.edu:2048/10.1016 /j.addbeh.2013.05.004

Hosmer, D. & Lemeshow, S. (2000). Applied Logistic Regression. Now York: Wiley.

Hsiung, R. (2001). Suggested principles of professional ethics for the online provision of mental health services. *Studies in Health Technology and Informatics, 84*(2), 1296-1300. http://dx.doi.org/10.3233/978-1-60750-928-8-1296

Johansson, R., Ekbladh, S., Hebert, A, et al. (2012). Psychodynamic guided self-help for adult depression through the Internet: A randomized controlled trial. *PLoS ONE, 7*(5). http://dx.doi.org/10.1371/journal.pone.0038021

John, O. & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement and theoretical perspectives. In L.A. Pervin & O.P. John (Eds.), *Handbook of personality: Theory and research*. New York: Guilford. http://search.proquest.com /docview/619404914?accountid=14522

Johnston, L., Titov, N., Andrews, G., et al. (2011). A RCT of a transdiagnostic Internet-delivered treatment for three anxiety disorders: Examination of support roles and disorder-specific outcomes. *PLoS ONE, 6*(11), 1-13. http://dx.doi.org/10.1371 /journal.pone.0028079

Jones, R., Goldsmith, L., Hewson, P., & Williams, C. (2013). Recruitment to online therapies for depression: Pilot cluster randomized controlled trial. *Medical Internet Research, 15*(3), 71-87. http://dx.doi.org.proxy.library.ucsb.edu:2048/10.2196 /jmir.2367

Kessler, D., Lewis, G., Kuar, S., et al. (2009). Therapist-delivered Internet psychotherapy for

    depression in primary care: A randomized controlled trial. *Lancet, 374*, 628-634.

    http://dx.doi.org/10.1016/S0140-6736(09)61257-5

Kosmin, B. & Keysar, A. (2009), American religious identification survey summary report.

    Trinity College, March, 2009. Retrieved from http://www.americanreligionsurvey-

    aris.org/reports/ARIS_Report_2008.pdf

Lam, C., Pepper, C., & Ryabchenko, K. (2004). Case identification of mood disorders in

    Asian American and Caucasian American college students. *Psychiatric Quarterly,*

    75, 361-373. http://dx.doi.org/10.1023/B:PSAQ.0000043511.13623.1b

Lee, S. (2010). Contemporary issues of ethical e-therapy. *Journal of Ethics in Mental*

    Health, 5(1). Retrieved from http://search.proquest.com/docview/901193537

    ?accountid=14522

Lipsey, M. & Wilson, D. (1993). The efficacy of psychological, educational, and behavioral

    treatment: Confirmation from meta-analysis. *American Psychologist 48*(12), 1181-

    1209. http://dx.doi.org/10.1037/0003-066X.48.12.1181

Mallen, M., Vogel, D., & Rochlen, A. (2005). The practical aspects of online counseling:

    Ethics, training, technology, and competency. *The Counseling Psychologist, 33*, 776-

    818.

Madden, M. & Zickuhr, K. (2011). 65% of online adults use social networking sites. *Pew*

    Internet & American Life Project, May 6, 2007. Retrieved from

http://www.pewinternet.org/2011/08/26/65-of-online-adults-use-social-networking-sites

Masuda, A. & Anderson, P. (2012). Help-seeking attitudes, mental health stigma, and self-concealment among African American college students. *Journal of Black Studies 43*(7), 773-786. http://dx.dio.org/10.1177/0021934712445806

Mathy, R., Kerr, D., & Haydin, B. (2003). Methodological rigor and ethical considerations in Internet-mediated research. *Psychotherapy: Theory, Research, Practice, Training, 40*(1), 77-85. http://dx.doi.org/10.1037/0033-3204.40.1-2.77

McNeilly, C. & Howard, K. (1991). The effects of psychotherapy: A reevaluation based on dosage. *Psychotherapy Research, 1*(1), 74-78. Retrieved from http://search.proquest.com/docview/618119770?accountid=14522

Na-Yeun, C. & Miller, M. (2014). AAPI college students' willingness to seek counseling: The role of culture, stigma, and attitudes. *Journal of Counseling Psychology 61*(3), 340-351. http://dx.doi.org/10.1037/cou0000027

Norcross, J. (1990). An eclectic definition of psychotherapy. In J.K. Zeig & W.M. Munion (Eds.), *What is psychotherapy? Contemporary perspectives* (218-220). San Francisco: Jossey-Bass.

O'Dell, J. & Dickson, J. (1984). ELIZA as a "therapeutic" tool. *Journal of Clinical Psychology, 40*, 942-945. Retrieved from http://search.proquest.com/docview/616983146?accountid=14522

Onken, L., Blaine, J., & Battjes, R. (1997). Behavioral therapy research: A conceptualization of a process. In S. W. Henngler & R. Amentos (Eds.), *Innovative approaches from difficult to treat populations*. Washington, DC: American Psychiatric Press. Retrieved from http://search.proquest.com/docview/619264251?accountid=14522

Perrini, S., Titov, N., & Andrews, G. (2008). The Sadness program: An open trial of Internet-based treatment for panic disorder. *Electronic Journal of Applied Psychology, 4*(2). Retrieved from http://ojs.lib.swin.edu.au/index.php/ejap/article/view/135/140

Prochaska, J., DiClementa, C., & Norcross, J. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47,* 1102-1114. http://dx.doi.org/10.1037/0003-066X.47.9.1102

Prochaska, J. & Norcross, J. (2010). *Systems of psychotherapy: A transtheoretical analysis (7th ed.).* Belmont: Brooks/Cole. Retrieved from http://search.proquest.com/docview/618563261?accountid=14522

Purcell, K. (2011). Search and email still top of the list of most popular online activities. *Pew Internet & American Life Project*, August 9, 2011. Retrieved from http://www.pewinternet.org/2011/08/09/search-and-email-still-top-the-list-of-most-popular-online-activities

Raine, L. & Zickuhr, K. (2010). Video calling and video chat. *Pew Internet & American Life Project*, May 6, 2007. Retrieved from: http://www.pewinternet.org/2010/10/13/video-calling-and-video-chat

Rammstedt, B. & John, O. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality, 41*, 203-212. http://dx.doi.org/10.1016/j.jrp.2006.02.001

Reips, U. (2002). Standards for Internet-based experimenting. *Experimental Psychology, 49*(4), 243-256. http://dx.doi.org/10.1026//1618-3169.49.4.243

Rochlen, A. & Hoyer, W. (2005). Marketing mental health to men: Theoretical and practical considerations. *Journal of Clinical Psychology, 61*(6), 675-684. http://dx.doi.org/10.1002/jclp.20102

Rounsaville, B., Carroll, K., & Onken, L. (2001). A stage model of behavioral therapies research: Getting started and moving on from stage I. *Clinical Psychology: Science and Practice, 8*(2). http://dx.doi.org/10.1093/clipsy/8.2.133

Sassenberg, K., Boos, M., Postmes, T., & Reips, U. (2003). Studying the Internet: A challenge for modern psychology. *Swiss Journal of Psychology, 62*(2), 75-77. Retrieved from http://search.proquest.com/docview/620275361?accountid=14522

Secure texting programs claiming "HIPAA Compliance". (2015, November 10). Retrieved from http://telehealth.org/hipaa-compliant-texting/

Smith, M.L., Glass, G., & Miller, T. (1980). *The benefits of psychotherapy.* Baltimore: John Hopkins University Press.

Tanaka-Matsumi, J. & Kameoka, V. (1986). Reliabilities and concurrent validities of popular self-report measures of depression, anxiety, and social desirability. *Journal of*

Consulting and Clinical Psychology, 54, 328-333. http://dx.doi.org/10.1037/0022-006X.54.3.328

Taylor, Janet, A. (1953). A personality scale of manifest anxiety. *Journal of Abnormal and Social Psychology, 48*(2), 285-290. http://dx.doi.org/10.1037/h0056264

Titov, N. (2011). Internet-delivered psychotherapy for depression in adults. *Current Opinion in Psychiatry, 24*, 18-23. http://dx.doi.org/10.1097/YCO.0b013e32833ed18f

Titov, N., Andrews, G., Johnston, L., Robinson, E, & Spence, J. (2010). Transdiagnostic Internet treatment for anxiety disorders: A randomized controlled trial. *Behaviour Research and Therapy, 48*, 890-899. http://dx.doi.org/10.1016/j.brat.2010.05.014

Tsan, J. (2007). Personality and gender as predictors of online counseling use. *Journal of Technology in Human services, 25*(3), 39-55. http://dx.doi.org.proxy.library.ucsb.edu:2048/10.1300/J017v25n03_03

Van Straten, A., Cuijpers, P., Smits, N. (2008). Effectiveness of a web-based self-help intervention for symptoms of depression, anxiety, and stress: Randomized controlled Trial. *Journal of Medical Internet Research, 10*(7). http://dx.doi.org/10.2196/jmir.954

Vaux, A., Burma, P., Stewart, D. (1986). Orientation toward utilization of support resources. *Journal of Community Psychology, 11*, 159-170. Retrieved from http://search.proquest.com/docview/617259720?accountid=14522

Vogel, D., Wade, N., & Hackler, A. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes towards

counseling. *Journal of Counseling Psychology, 54*, 40-50. http://dx.doi.org/10.1037
/0022-0167.54.1.40

Wamerdam, L., Van Straten, A., Twisk, J., et al. (2008). Internet-based treatment for adults
with depressive symptoms: Randomized controlled trial. *Journal of Medical Internet
Research, 10*(44). http://dx.doi.org/10.1186/1471-244X-7-72

Wampold, B., Mondin, G., Moody, M., Stitch, F., Benson, K., & Ahn, H. (1997). A meta-
analysis of outcome studies comparing bona fide psychotherapies: Empirically, "all
must have prizes." *Psychological Bulletin, 122*(3), 203-215.
http://dx.doi.org/10.1037/0033-2909.122.3.203

Wu, T. & Wei, M. (2008). Perfectionism and negative mood: The mediating roles of
validation from others versus self. *Journal of Counseling Psychology, 55*(2), 276-
288. http://dx.doi.org/10.1037/0022-0167.55.2.276

Zartaloudi, A. & Madianos, M. (2010). Stigma related to help-seeking from a mental health
professional. *Health Science Journal, 4*(2), 77-83. Retrieved from
http://www.hsj.gr/medicine/stigma-related-to-helpseeking-from-a-mental-health-
professional.pdf

Zung, W. (1971). A rating instrument for anxiety disorders. *Psychosomatics, 12*, 371-379.
Retrieved from http://search.proquest.com/docview/615827798?accountid=14522.

Zung, W. (1965). A Self-Rating Depression Scale. *Archives of General Psychiatry, 12*, 63-
70. Retrieved from http://search.proquest.com/docview/615443162?accountid
=14522

APPENDIX A: Transcript of Traditional Psychotherapy Vignette Voice Over

This is Jenny. Every Tuesday evening after work, she drives to a local psychotherapist's office. She waits in the waiting area for her appointment, while her therapist finishes up with the previous client. Her therapist greets her at her appointment time and takes her back into a room with a chair and a comfortable couch. She sits across from her therapist and discusses her presenting issue of anxiety. Jenny has been a worrier all of her life, but has been feeling intense symptoms of anxiety ever since a family friend died in a car accident. Her symptoms of anxiety are currently disrupting her ability to work effectively at her job. They spend 50 minutes speaking with one another and Jenny's therapist helps her develop effective ways to cope with her feelings of anxiety as well of different ways to think about her situation. When the session is over, Jenny settles payment with her therapist and schedules the next session.

APPENDIX B: Transcript of Online Guided Self-Help Vignette Voice Over

This is Jenny. Jenny has been experiencing strong symptoms of anxiety during her daily life ever since her family friend died in a car accident. This experience has been affecting her ability to work at her job. To aid in coping with her anxiety, Jenny logs on to a secure internet program throughout her week whenever she has some free time. On this program she learns about anxiety and its causes. She is also taught strategies to help reduce her symptoms and ways to change her worrying thoughts. These lessons are called "modules" and take approximately 1 hour to complete, but can be paused and started at any time throughout the week. After concluding a module, Jenny completes an assignment based on the week's topic and sends it to a licensed therapist, who then provides feedback by email once per week. Payment is sent through a secure online transaction service.

APPENDIX C: Transcript of Text-Based Internet Psychotherapy Vignette Voice Over

This is Jenny. At 9 PM every Monday night, she logs onto a secure instant messaging program online to speak with her psychotherapist. They do not see one another physically, but meet in real time online and exchange instant text messages back and forth during one hour sessions. Jenny struggles with strong symptoms of anxiety that became worse after the recent death of a family friend. This anxiety is causes Jenny to have problems at work. She chats with her therapist for 50 minutes online about effective ways that Jenny can cope with her feelings of anxiety and ways in which she can change her worrying thoughts. At the end of the session, Jenny and her therapist confirm their next appointment and log off from the instant messaging program. Payment is sent through a secure online transaction service.

Tables and Figures

Table 1
Online Treatment Modalities

	Synchronous	Asynchronous
High Intensity	Real-time instant message therapy with long sessions (Kessler et al., 2009)	Self-help modules with extensive clinician feedback or forum participation (Perini, Titov, & Andrews, 2009)
Low Intensity	Real-time instant message therapy with brief sessions (Andersson et al., 2005)	Self-help modules with minimal clinician contact (Carlbring et al., 2012)

Table 2

One-Way Between Group Analyses of Variance with Post-Hoc Contrasts and Effect Size

	Face-to-Face M(SD)	Text-Based M(SD)	Self-Help M(SD)	F	Contrasts
Extroversion	**24.66(7.08)**	**21.70(6.72)**	**21.84(6.76)**	**28.95***	**F > T (*d* = 0.42)** **F > S (*d* = 0.40)**
Agreeableness	33.69(5.50)	33.13(5.96)	32.50(5.65)	3.94*	F > S (*d* = 0.19)
Neuroticism	25.35(6.68)	26.97(6.30)	25.25(6.62)	7.35***	T > F (*d* = 0.25) T > S (*d* = 0.27)
Conscientiousness	31.24(6.02)	30.33(6.16)	31.10(5.60)	2.53	
Openness	37.57(5.85)	37.29(5.89)	36.82(5.97)	1.76	
SAS	38.29(9.76)	41.60(10.14)	38.97(10.06)	12.33***	T > F (*d* = 0.33) T > S (*d* = 0.26)
SDS	41.50(9.93)	45.38(10.14)	43.35(10.35)	17.10***	T > F (*d* = 0.39) S > F (*d* = 0.18)
NOS	**43.39(7.35)**	**46.58(7.68)**	**47.41(7.46)**	**40.66***	**T > F (*d* = 0.42)** **S > F (*d* = 0.54)**
Treatment Satisfaction	**3.73(0.97)**	**2.92(1.02)**	**3.01(0.95)**	**48.84***	**F > T (*d* = 0.82)** **F > S (*d* = 0.75)**
Meeting Ability	**3.86(1.24)**	**3.34(1.37)**	**3.31(1.37)**	**28.43***	**F > T (*d* = 0.40)** **F > S (*d* = 0.42)**

*$p < .05$. **$p < .01$. ***$p < .001$.
Bold indicates moderate or higher effect size.
F = Face-to-face preferred. T = Text-based preferred. S = Self-help preferred. SAS = Self-Report Anxiety Scale. SDS = Self-Report Depression Scale. NOS = Network Orientation Scale.

Table 3

Binary Logistic Regression Analysis Predicting Preference for Internet-Based Treatment

				Statistics at Entry		
Block	*Step*	*Source*	*B*	*SE B*	*Wald*	*p*
1	1	Network Orientation Scale	-.07	.01	69.82	<.01
	2	Network Orientation Scale	-.07	.01	56.68	<.01
		Meeting Ability	.28	.05	39.53	<.01
	3	Network Orientation Scale	-.05	.01	30.71	<.01
		Meeting Ability	.28	.05	38.31	<.01
		Extraversion	.05	.01	19.05	<.01