DO QUALITY WEBSITES MATTER? FACTORS AFFECTING ONLINE TREATMENT ACCEPTABILITY

by

Sara L. Hancock

An Abstract of a thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in the Department of Psychological Science University of Central Missouri

July, 2017
ABSTRACT

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This study examined website quality factors, perceived initial trust (PIT) and online treatment acceptability (OTA) of telepsychology sites. A between-subjects factorial multiple analysis of covariance also examined two covariates (attitudes toward the Internet [IA] and psychotherapy [PA]). Volunteers reviewed fictitious websites depicting one of four combinations of levels of the independent variables, content and design quality (high versus low). It was hypothesized that (a) participants would rate the websites differently; (b) the independent variables would interact; and (c) covariates would significantly affect PIT and OTA. Differences in PIT and OTA were observed between the website conditions. However, content and design were not found to interact with each other in affecting PIT or OTA. IA also predicted PIT and OTA, but PA did not. Overall, the present findings suggest that content quality does impact consumer decision making regarding telepsychology services and could have important implications for how providers design their websites.
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CHAPTER 1
NATURE AND SCOPE OF
THE STUDY

Current online technologies, including telepsychological services, are more widely available now than ever before (International Telecommunications Union [ITU], 2015). In light of this fact it is not surprising that online mental health services are also becoming more common (Maheu, McMenamin, Pulier & Posen, 2012). In fact, many online mental health services, otherwise known as telepsychology, may be found by simply searching for one of many websites via popular search engines such as Google (Hancock, Stark & Kreiner, 2016). Telepsychology services have been recognized as beneficial in many ways for both the providers and consumers of such services. For example, telepsychology increases both the convenience and affordability of mental health service and enables therapists’ communication with long-distance clients such as military personnel (Heinlen, Welfel, Richmond & O’Donnell, 2003).

Despite the growing attractiveness of telepsychology services very little literature or research currently exists regarding the factors that influence consumer perceptions of the acceptability of online therapy services. Some factors have been previously examined regarding consumer acceptance of electronic commerce, also known as e-commerce, (i.e., consumers’ interaction in the electronic exchange process and relationship with Web retailers) including the online exchange of goods and services in areas such as shopping and retail (Ahn, Ryu & Han, 2007; Green & Pearson, 2011; Koufaris, 2002; Pavlou, 2003). Across this literature three salient factors have emerged in the study of website quality and user satisfaction: content (e.g., the information regarding services offered, provider credentials, outcome data, etc.), design (e.g., overall aesthetic qualities, visual appearance, and graphics) and trust (i.e., the degree to which the website is viewed as safe and worthy of personal transactions) (Beck, 1997; Grigoroudis,
Litos, Moustakis, Politis & Tsironis, 2008; Khawaja & Bokhari, 2010; Lui et al., 2009; Tan, Benbasat & Cenfetelli, 2008). These three factors have been found to significantly impact online consumer behavior and the likelihood of technology acceptance (i.e., technology that is viewed by consumers as a viable means for a transaction between themselves and the provider of goods or services) (Lui et al., 2009; Khawaja & Bokhari, 2010; Pavlou, 2003). For example, Khawaja and Bokhari (2010) found that factors such as the quality of the design and accuracy of the content of comparable e-services websites were significantly related to user satisfaction. However, the degree to which these factors may affect consumer behavior regarding the acceptance of services from telepsychology websites is still largely unknown.

Other research in the area of online consumer behavior has concluded that there is an intuitive component that influences online consumer behavior: trust (Tan, et al., 2008). Research has found that trust is experienced (or not experienced) as users make the ultimate decision of whether they intend to transact with the provider(s) of e-services (Green & Pearson, 2011; Tan et al., 2008). For instance, when consumers evaluate the websites of e-public service providers, such as e-government sites, they intuitively make an initial judgement on whether or not they would make a transaction; this process is more specifically referred to as perceived initial trust (PIT) (Tan et al., 2008). Based on this body of research it is conceivable that perceived initial trust might also significantly influence consumer acceptance and transaction behavior toward other sectors of electronic commerce, including telepsychology. This notion is further supported by the conceptual framework of the Technology Acceptance Model (TAM) (Davis, 1986). The TAM is an information systems theory that has been widely used in the past and is one of the most popular conceptual models for predicting consumer use and acceptance of information technology (IT) systems (Davis, 1989; Surendran, 2012). Furthermore, the TAM has been used
to successfully predict consumer acceptance of technology (Davis et al., 1989) and the rising practice of e-commerce (Pavlou, 2003; Tan et al., 2008).

As the use of technology and the Internet continue to rise, research regarding online consumer behavior and Web providers’ services has become more important than ever. Although research integrating the TAM and e-commerce has been able to provide better, more comprehensive descriptions and predictions of online consumer behavior in areas such as retail, public education, and other online public services, previous research has not examined consumers’ behavior and acceptance of online mental health services (Hu, Chau, Liu Sheng & Tam, 1999; Tan et al., 2008).

By extending the work of previous research in the area of website credibility, electronic commerce, and technology acceptance, the current researcher sought to empirically evaluate whether or not quality factors, specifically the quality of (a) the content and (b) the design of a telepsychology website, would affect consumers’ perception of online treatment acceptability. In order to do so, a 2 (quality of content) X 2 (quality of design) between-subjects factorial experimental design was used. The independent variables for this experiment were the quality levels (high versus low) of the (a) content and (b) design of each of four fictitious website conditions. Participants in this study were 120 volunteer undergraduate students who were at least 18 years of age and may have participated to meet requirements for the completion of undergraduate psychology courses. Each participant was randomly assigned to review one of the four model website conditions created by the researcher (i.e., high quality content with high quality design, high quality content with low quality design, low quality content with high quality design or low quality content with low quality design) and were asked to spend approximately 30 minutes reviewing the content and design of the website. Afterwards,
participants were asked to complete online surveys containing measures of the two dependent
variables and two covariates, attitudes toward the Internet and attitudes toward psychotherapy,
which were hypothesized to potentially interact with the independent variables. Participants
were asked to provide demographic information at the end of the survey. Final scores for the
dependent variables were composed of participants’ total scores from two measures, one
regarding online treatment acceptability and one regarding perceived initial trust. Observational
data were used to create the fictitious model websites so that each site closely mimicked the
online environment potential consumers would likely encounter in real-life.

In an effort to determine which factors influence consumer perception of online therapies
the most, the present study examined the extent to which consumer decisions to accept
telepsychology services might be influenced by the quality of the website’s content (i.e.,
inclusion of important information) compared to the quality of design factors such as
attractiveness, graphics and usability. The results of this study could potentially serve many
important purposes. In particular, the results of this study could advance our understanding of
the factors that influence consumers’ perception of online treatment acceptability. For example,
it is unknown what factors motivate consumers to choose one telepsychology provider(s) and/or
services over another. The current research also attempted to apply a model (TAM) that has
been used to study other forms of online consumer behavior to the study of telepsychology.
CHAPTER 2
LITERATURE REVIEW

The Use of Technology

The use of Internet technology is quickly rising (International Telecommunication Union [ITU], 2015). In fact, online technology, including telepsychological services, are more widely available now than ever before. This claim is supported by the ITU’s estimate that as many as 7 billion mobile service devices were in active use worldwide by the end of year 2015 (ITU, 2014). The ITU (2015) further predicted, at that time, that these devices would have an approximate penetration rate of 97% of the adult population. Other estimates for global Internet reach have risen as high as 3.2 billion Internet users, growing seven-fold from the year 2000 (ITU, 2015).

The widespread growth of wireless Internet and mobile service availability has enabled the users of personal electronic communication devices (such as smart phones) to conveniently surf a reliable stream of information, and easily access online services, while also facilitating remote connections with nearly anyone, at anytime, anywhere in the world (ITU, 2015).

Furthermore, the development of popular smart phone applications and computer programs such as Facetime and Skype allow users to not only hear but also see the people with whom they are communicating (Apple, 2015; Microsoft, 2016). As the power of technology continues to grow and expand, increasingly sophisticated applications become more available (Davis, 1989). Davis et al. (1989), stated “As technical barriers disappear, a pivotal factor in harnessing this expanding power becomes our ability to create applications that people are willing to use” (p. 982). Davis et al.’s (1989) claim highlights the fact that new technologies are only successful if consumers are willing to use them. This may be true of virtually all technology, including online mental health services, otherwise known as telepsychology.
Defining Telepsychology Services

Technological advances have had a substantial impact on the way mental health and other service providers conduct their business (Hu et al., 1999; Pavlou, 2003). Advances in Internet technology (IT) have provided both providers and consumers of many goods and services with new, more convenient options for service delivery though online mediums (referred to as e-commerce) (Pavlou, 2003, p.70). Telepsychology, also referred to as e-therapy, e-mental health service, online therapy, web counseling or behavioral telehealth (Heinlen et al., 2003), is presently defined as any form of therapy wherein mental health professionals provide therapeutic services for their clients through the Internet via an electronic medium such as a computer, tablet or Smart phone (Rochlen, Zack, & Speyer, 2004).

Benefits and Risks of Telepsychology

Major benefits of telepsychology services have been cited by several authors as providing an alternative means of service to people who are uncomfortable interacting in a face-to-face setting (Day & Schneider, 2002; Maheu & Gordon, 2000; Rochlen et al., 2004). Also, telepsychology provides convenience, cost-efficiency and a sense of anonymity (Heinlen et al., 2003). In addition, for psychologists, telepsychology options have provided a means for instantaneous communication with hard to reach clients, such as military personnel (Heinlen et al., 2003). Telepsychology services also offer the recipients of mental health services a variety of new service opportunities such as email and video conferencing sessions that may be more appealing to clients who are unfamiliar or uncomfortable with traditional therapy (Day & Schneider, 2002; Maheu & Gordon, 2000; Rochlen et al., 2004). For consumers with chronic illnesses, the convenience of online services was found to be one of the most salient factors in consumer preference for telehealth care services (Lu, Chi & Chen, 2013).
services might also increase disinhibition and internalization throughout the therapeutic process by actively encouraging expression and reflection while allowing the client to control the pace and setting in which he or she receives therapy (Rochlen et al., 2004).

Despite the many benefits of telepsychological services, it is important to note that there are some legal and ethical issues that arise unique to the practice of telepsychology. Shaw and Shaw (2006) evaluated several online counseling websites regarding potential ethical issues including (a) the trustworthiness of the provider, (b) the providers’ duty to warn and protect, (c) adolescent Internet use and difficulty ensuring clients are of legal age (i.e., 18 years or older), (d) confidentiality issues over the Internet, (e) the appropriateness of online treatment for certain issues such as child abuse and/or suicidality, and (f) legal conflicts associated with interstate jurisdiction. Some of these issues, such as interstate jurisdiction and the duty to warn and protect, are related to problems regarding the geographic distance between the provider and client which makes abiding by each state’s laws complicated (Harris & Younggren, 2011; Shaw & Shaw, 2006). Other issues, such as difficulty guaranteeing confidentiality, problems with verifying the age of clients and the appropriateness of online treatment for certain problems (e.g., suicidal patients), are inherently related to the nature of the Internet-based services and may be harder to resolve (Shaw & Shaw, 2006).

Although the American Psychological Association (APA) has recently published the *Guidelines for the Practice of Telepsychology* (2013), which provide suggestions on how to address certain issues uniquely related to telepsychology practice (e.g., managing the differences that exist in each state’s laws governing the practice of psychology and the heightened concern for the privacy and confidentiality of the client when providing services over the Internet), the extent to which practitioners adhere to the guidelines is not well known. Despite the attempts of
the APA (2013) and other professional organizations (e.g., the National Board for Certified Counselors [NBCC, 2012] and the American Counseling Association [ACA, 2014]) to provide guidelines for telepsychology practice, it appears that many providers are not complying with the suggestions put forth within such guidelines (Hancock et al., 2016; Heinlen et al., 2006; Shaw & Shaw, 2003). For example, many telepsychology providers’ websites fail to include information regarding the informed consent process and confidentiality despite recommendations that providers include such information to all new clients (Shaw & Shaw, 2003). Many providers’ websites fail to include information regarding the specific parameters of the services they offer and many providers also do not provide adequate disclosure of their educational credentials and/or licensure information within the content of their websites (Heinlen et al., 2006; Shaw & Shaw, 2003). The inclusion of such information, not specific to telepsychology, is crucial for consumers to make truly informed decisions regarding their treatment and whether or not to pursue such services (Fisher, 2008). Nonetheless, despite research indicating that some online service providers’ websites might not be adhering closely to professional guidelines regarding the practice of telepsychology, consumers do not seem to be deterred from seeking online psychological and counseling services. In fact, the demand for such services has increased steadily in the past several years (Maheu, Pulier, McMenamin & Posen, 2012).

**Consumer Behavior and Demand for Services**

The availability of telepsychological services has increased substantially in recent years; this is likely a result of increased demand from consumers for online mental health services (Maheu et al., 2012). Unfortunately, a disparity exists between the availability of quality service providers and consumer demand for telepsychology services (Maheu et al., 2012). This may be largely due to the fact that, while consumer demand continues to rise steadily, many qualified
professional service providers refuse to adopt, show interest in or even acknowledge telepsychology as a valid form of psychological treatment (McMinn, Buchanan, Ellens & Ryan, 1999; Shaw & Shaw, 2006). This should be of serious concern for both consumers and providers of psychological services as the existence of a disparity between the demand from consumers and the professional readiness of the field opens the door for unqualified providers to fill in the gap by offering services to consumers who may not be able to recognize the difference between qualified, trained professionals versus nonprofessionals (Maheu et al., 2012).

**Proceed with Caution: Consumers Beware**

The introduction of psychotherapeutic services over the Internet introduces the risk of consumers engaging with providers who offer services that do not meet the professional standards set forth by the APA (2013) and other professional guidelines. For instance, many websites advertise themselves as offering “Online Coaching,” “Life-coaching,” or “Online counseling” and so on, which give websites the superficial appearance of professional credibility; however, the providers of such websites rarely list any credentials qualifying them to provide such services and they seldom provide visitors with adequate information regarding informed consent and confidentiality (Hancock et al., 2016; Heinlen et al., 2003), which are essential for potential clients to make informed treatment decisions (Maheu et al., 2012; Fisher, 2008). It is therefore extremely important for Internet users who may be searching for online mental health services to understand that not all websites are created equal. Thus, it is equally paramount for researchers to understand what factors might influence consumer preference for a non-professional service provider’s website over a more qualified service provider’s site.
Quality and Website Factors

According to research regarding general online consumer behavior, certain factors such as the content and design of individual websites, significantly impact consumers’ perception of trust and acceptance of online technology in other comparable areas of e-commerce, such as e-government services and online retail (Koufaris, 2002; Tan et al., 2008). Furthermore, research on Internet user-satisfaction and electronic commerce (EC) repeatedly suggests that some factors influence online consumers’ behavior more than other factors when deciding whether to transact with an e-service provider (Khawaja & Bokhari, 2010; Mahike, 2002). Specifically, content (e.g., the information included regarding services offered, provider credentials, outcome data), design (e.g., overall aesthetic qualities, visual appearance, and graphics) and trust (the degree to which the website is viewed as safe and worthy of personal transactions) (Beck, 1997; Grigoroudis, Litos, Moustakis, Politis & Tsironis, 2008; Khawaja & Bokhari, 2010; Lui et al., 2009; Tan et al., 2008), have been cited more than any other factors as having a significant impact on consumer acceptance, intention to transact and overall behavior regarding online services (Khawaja & Bokhari, 2010; Mahike, 2002; Tan et al., 2008, Pavlou, 2001, 2003). For example, Khawaja and Bokhari (2010), noted that websites with high quality content and/or design were preferred significantly more by online users than websites with poor quality content and/or design. However, the degree to which these factors affect consumer behavior regarding the acceptance of telepsychology services is unclear.

Many factors have been studied in relation to consumer purchasing behavior and perception of website quality. Interestingly, similar factors seem to emerge as most predictive of consumer attitudes and behavior in other existing literature. For example, Lui, Du, and Tsai (2009) conducted a study to develop a general measure of website portal quality and identified...
four distinct factors influencing customer satisfaction: usability, adequacy of information, appearance, and privacy and security. However, of these four factors, adequacy of information (i.e., content quality) and appearance (i.e., design quality) were found to contribute the most toward customer satisfaction.

**Website Content.** Beck (1997) described a website’s content as the quality aspect that is most related to the initial perceived trustworthiness of the information that is being provided as well as its ability to satisfy a user’s inquiry. Informational content is also important in the relationship between a user and the website interface. As Khawaja and Bokhari (2010) stated, because websites play an important role in connecting consumers to e-service providers, it is essential that certain information be included within the content and design of the website itself rather than being presented to the client after agreeing to pay for services. Website content was further assessed by Grigoroudis, Litos, Moustakis, Politis and Tsironis (2008) on nine quality dimensions including relevance (i.e., does the content relate to the consumers’ perception of their needs?), usefulness (i.e., extending relevance to the users’ specific inquiry), reliability (i.e., accuracy of the informational content provided within the website), specialization (i.e., the specificity of the content within the website), architecture (i.e., the way that the content is organized within the website), navigability (i.e., the ease of use and the convenience of navigating the site), efficiency (i.e., the technical performance of the website), layout (i.e., presentation of objects within the design of the website) and animation (i.e., the inclusion of moving objects that present information within the website). The results of this study determined that all nine factors are important in determining user satisfaction; however, usefulness and layout were found to be the two most important criteria (Grigoroudis et al., 2008).
Despite the importance of informational content, previous research examining existing telepsychology websites has found a general trend reflecting missing information within telepsychology websites (Heinlen et al., 2003; Maheu et al., 2012; Shaw & Shaw, 2006). Heinlen et al. (2003) collected data from 44 websites located through searching Google by using keywords such as “online” and “psychologist.” Each of the websites were evaluated using the Internet Therapy Web Site Evaluation Form (ITWEF), which was developed based on the International Society for Mental Health Online (ISMHO)’s (2000) principles and APA’s (2002) Ethical Principles of Psychologists and Code of Conduct. Heinlen et al. (2003) found that many websites excluded pertinent information from their pages. For example, 36% of the sampled websites failed to include information regarding the providers’ qualifications or professional training within the content of the webpage (p. 112). Shaw and Shaw (2006) published similar findings after evaluating 88 websites of a similar nature, reporting that, although 75% of the sampled websites indicated that the provider held a qualifying degree, only 51% provided specific information regarding the specific college, degree program or major associated with said degree (p. 48). Shaw and Shaw (2006) also reported that only 32% of the websites they reviewed required consumers to electronically sign a waiver regarding confidentiality, a required component of face-to-face therapy (p. 48).

Although it is clear that many websites which offer online mental health services are not including adequate information or disclosure within the content of their pages, it is less clear how much the inclusion (or exclusion) of such information actually influences consumer behavior regarding treatment acceptance. Also, content is not the sole factor impacting consumer decision-making. As the research by Grigoroudis and colleagues (2008) reveals, other factors
such as layout (i.e., design) and perceived trust (Tan et al., 2008) may also influence consumer behavior and treatment acceptability, as will be discussed in the following paragraphs.

**Website Design.** Although content is an essential component of quality websites, it is not the only factor related to online treatment acceptability (Grigoroudis et al., 2006; Khawaja & Bokhari, 2010; Lui et al., 2009; Mahike, 2002). Research on e-service quality and user satisfaction has found that the quality of the design of websites as well as the content are key components in consumer satisfaction and use (Grigoroudis et al., 2006; Khawaja & Bokhari, 2010; Lui et al., 2009; Mahike, 2002). Research conducted by Khawaja and Bokhari (2010) found that design quality, or visual appearance, had a significant impact on Internet users’ perceived initial trust and satisfaction with public services providers’ websites. Khawaja and Bokhari (2010) also noted users were more satisfied with websites that are fast, aesthetically appealing and easy to use when they analyzed survey responses from 123 students regarding their perceptions of a university website. Similar to the results of Lui et al. (2009), Khawaja and Bokhari (2010) evaluated nine website dimensions (reliability, empathy/navigability, responsiveness, efficiency, functionality, usefulness, ease of use, informational accuracy, and web appearance). Respondents were asked to provide answers to a 33-item questionnaire regarding the quality of and user satisfaction with the website. Khawaja and Bokhari (2010) reported that, of the nine test dimensions, the best predictors of user-satisfaction were (a) usefulness/ease of use ($t = 2.059, p = .042$), (b) informational accuracy (i.e., quality content) ($t = 4.648, p < .0001$) and (c) web appearance (i.e., quality design), ($t = 8.619, p < .0001$). A regression analysis was used to evaluate the relationship between these factors and student satisfaction. The regression model employed by Khawaja and Bokhari (2010) was determined to be a good fit; the regression equation accounted for 82% of the variance in student satisfaction.
and a multiple correlation coefficient of $R = 0.914$ indicated that there was a strong positive relationship between these factors and student satisfaction. The results also suggest that the quality of the design may actually be the most important factor, as web appearance was reported to have the strongest relationship with students’ self-reported satisfaction with a university website (pp. 41-42). However, the extent that these two factors (i.e., quality content and quality design) influence online treatment acceptability of telepsychology services has yet to be explored.

**Perceived Initial Trust.** Other research in this area has concluded that there is also an intuitive component related to both content and design factors which influences online consumer behavior as users make the ultimate decision of whether or not they intend to make a transaction with e-service providers (Tan et al., 2008). For instance, Tan et al. (2008) found that when consumers evaluate the websites of e-public service providers they make an initial judgement on whether or not they intend to make a transaction. Tan et al. (2008) further suggested that quality factors, such as design and content, had a significant impact on whether their participants experienced perceived initial trust and whether they chose to transact with an e-public service website.

The results of the study by Tan et al. (2008) suggest that perceived initial trust might influence consumer acceptance and transaction behavior toward other sectors of e-commerce. This could include the delivery of therapy and other mental health services (i.e., telepsychology) online. Following his conceptual paper introducing the Technology Acceptance Model (Davis, 1986), Davis and colleagues (1989) became the first group of researchers to evaluate online consumer behaviors such as technology acceptance and behavioral intent to transact. Utilizing models from social psychology, such as Fishbein and Ajzen’s (1975) theory of reasoned action
EFFECT OF WEBSITE CONTENT ON PIT AND OTA

(TRA), as a theoretical foundation, Davis (1986) created a structural framework model known as the Technology Acceptance Model (TAM), further described in the following section.

Technology Acceptance Model

Davis et al. (1989) predicted that as the power of computer technology continues to improve, sophisticated applications of such technology would become more economically feasible. Twenty years later, this prediction has come true. Today, there exists an online substitute for a variety of goods and services, including telepsychology (Ahn et al., 2007). The advent of the Technology Acceptance Model (TAM) near the end of the 20th century provided one of the first theoretical frameworks for analyzing and predicting online consumer behavior regarding electronic commerce (Davis, 1989; Davis, Bagozzi & Warshaw, 1989; Koufaris, 2002; Pavlou, 2003). Davis et al. (1989) developed and tested the TAM as they evaluated the acceptance of word-processing technology among Masters of Business Administration (MBA) students. Davis et al. (1989) found that technology acceptance was influenced by a variety of factors, including behavioral intent and usefulness, which were based on external factors such as content and design. Davis et al. (1989) concluded that providers and users alike require a better understanding of why people accept or refuse the use of technology to create practical measures for evaluating technology systems, predict user behavior, and improve consumer acceptance of technology (Davis et al., 1989).

Further investigation of the TAM supports its applicability to a variety of other technological services. For example, Pavlou (2001; 2003) utilized the TAM to explain consumer acceptance of electronic commerce as a function of the degree of trust and risk that the consumer associated with online service transactions. The Pavlou (2003) study provided results indicating that content and design factors as well as trust could significantly predict user acceptance of
online technology. Furthermore, Pavlou (2003) argued that the success of electronic commerce depends on consumer acceptance of Internet technology as a viable means for the transaction of goods and services as well as consumer recognition of e-service providers as reliable merchants. This argument was explained and supported by Davis’s (1986) TAM (Pavlou, 2001; 2003).

To date, the only example of the TAM being applied to the study of telehealth care services was a study conducted by Hu, Chau, Liu Sheng and Tam (1999). Hu and colleagues (1999) used the TAM as a framework for their study predicting practitioner acceptance of telemedicine technology within the providers’ own practices. Hu et al. (1999) distributed 1,728 surveys to practitioners working in 41 clinical hospital departments, and a total of 421 surveys were completed and returned. Hu et al. (1999) then utilized structural equation modeling (SEM) to predict practitioner acceptance of telemedicine technology. Their results indicated that “the TAM model was a good fit” on seven different goodness-of-fit indices (pp. 103-104). The observed $R^2$ values for each of the dependent constructs were then evaluated and together accounted for 37 percent of the variance observed in physicians’ attitudes toward integrating telemedicine technologies into their service (Hu et al., 1999). However, Hu et al. (1999) concluded that, although the TAM was able to provide a reasonable depiction of providers’ acceptance of telemedicine, the $R^2$ values were relatively low. The authors suggested that incorporating additional factors might provide a better depiction of the TAM as it relates to the study of telemedicine (Hu et al., 1999). To the current author’s knowledge, the TAM has yet to be used to evaluate consumers’ attitudes and behavior with regard to telehealth care services. Given the general nature of the TAM and its application to the study of telemedicine, it seems reasonable to assume that the TAM might also be applied to the study of consumer acceptance of telepsychology services (Hu et al., 1999; Pavlou, 2001; 2003).
Integrating Website Quality and Technology Acceptance

Although previous research on the TAM has not yet been applied to consumer behavior regarding telepsychology directly, interesting parallels can be seen when considering research applying the TAM to the evaluation of e-government service websites and citizen trust (Tan et al., 2008). As cited in Tan et al. (2008), Mayer, Davis, and Schoorman (1995) suggested that the degree to which a trustor trusts a trustee is directly determined by the trustworthiness of the latter. Furthermore, that trustworthiness in and of itself is primarily “rooted in the trustor’s perceived attributes of ability, benevolence [doing no harm] and integrity [upholding morals and honesty] implicit in the trustee” (Tan et al., 2008, p. 1). Tan et al. (2008) further described the conditions under which e-service consumers will come to treat technological artifacts (e.g., webpages, messengers, and social media pages) as social actors, ascribing humanlike characteristics, such as trustworthiness, to them. Tan and colleagues (2008) analyzed survey data from a sample of e-government service participants using SEM to determine whether trust significantly predicted user intent to transact and acceptance of e-government service websites. The results of Tan et al.’s (2008) analysis indicated that trust was a reliable predictor of user transaction behavior (α = .91), and the authors concluded that their model was a good fit. The research conducted by Tan et al. (2008) used the TAM and factors such as trust and the content quality and design quality of web interfaces to explain their finding that high quality design in e-government websites significantly impacts the degree to which citizens develop trust in public e-services (Tan et al., 2008).

Even though previous research regarding trust and technology acceptance has primarily focused on the study of electronic commerce as it relates to sales, retail and public service, the definition of electronic commerce includes the transaction of any product or service that occurs
between a human and another human or organization through the use of an electronic medium (Koufaris, 2002; Pavlou, 2003; Tan et al., 2008). This definition would certainly include e-mental health services such as telepsychology (Rochlen et al., 2004). As such, it is reasonable to conclude that the existing research and conceptual frameworks (such as the TAM) pertaining to other e-services might also be applied to the study and evaluation of consumer behavior regarding telepsychology and online treatment acceptance.

**Purpose**

The purpose of this study was to evaluate what effect the factors of content quality and design quality of telepsychology websites might have on consumers’ evaluation of trust and self-reported online treatment acceptability of telepsychology service providers. In other words, this research was conducted in an attempt to determine, empirically, if the quality of the (a) informational content and (b) aesthetic design of a website influence whether or not a consumer would trust a website enough to accept online therapy services from a telepsychology provider.

**Research Question**

Based on a review of previous research regarding technology acceptance (Ahn et al., 2007; Davis, 1989; Davis et al., 1989; Green & Pearson, 2001; Koufaris, 2002; Pavlou, 2001, 2003; Tan et al., 2008) and telepsychology (Rochlen et al., 2004; Heinlen et al., 2003; Shaw & Shaw, 2006) the present study addressed the following research question: To what extent is consumers’ acceptability of a telepsychology provider’s online treatment affected by the quality of (a) informational content and (b) design of a telepsychology service provider’s website? That is, this study examined whether consumers are more apt to trust and accept treatment from providers who supply quality informational content regarding their qualifications and service as well as whether consumers are more likely to trust and accept treatment from providers who
employ fancy or flashy web designs. This study also investigated whether any interactions existed between the quality of (a) informational content and (b) design of a website, in determining (c) consumers’ trust and (d) acceptance of online treatment from a telepsychology provider (see Figure 1).

The present study predicted that both the quality of the (a) informational content and (b) design of a fictitious telepsychology provider’s website would significantly affect participants’ (c) trust and (d) treatment acceptability ratings. It also predicted that there would be an interaction between content quality (e.g., high versus low) and design quality (e.g., high versus low), such that participants would be more willing to accept treatment from a website that provides low quality content if the website is of high (versus low) quality design. It was further predicted that both content and design quality factors would significantly affect users’ reported perceived initial trust which, in turn, would predict online treatment acceptability. Lastly, it was predicted that attitudes toward (e) the Internet and (f) psychotherapy would be related to both (c) perceived initial trust and (d) online treatment acceptability. Thus, these factors (e and f) were accounted for in the statistical analyses (see Figure 1). The last prediction was exploratory in nature and served the purpose of providing additional information regarding possible covariates that might influence the statistical model.
Figure 1

*Conceptual Framework of Design and Hypotheses*
Hypotheses

The evaluation of previous literature and research were used to create a conceptual framework for the current research model and hypotheses. Figure 1 describes the process that I predicted would occur as consumers make the decision to accept treatment from a telepsychology provider. As shown, the current experimental design manipulated the levels of the independent variables (a) content quality (high versus low) and (b) design quality (high versus low) to determine what effects these two variables have on online treatment acceptability. Experimental manipulation was achieved by randomly assigning participants to review and later evaluate one of four conditions in which the independent variables of (a) content quality and (b) design quality of a fictitious telepsychology website were manipulated (i.e., high quality content and high quality design, high quality content and low quality design, low quality content and high quality design, or low quality content and low quality design). After reviewing their assigned websites, participants completed the measures of both dependent variables (i.e., ratings of perceived initial trust and online treatment acceptability). Additionally, a multiple regression analysis of the conceptual model was conducted to determine whether (c) perceived initial trust was the most significant predictor of (d) online treatment acceptability, when accounting for quality factors (a and b), and the covariates of attitudes toward (e) the Internet and (f) psychotherapy. The following four hypotheses were tested: First, those who encounter a telepsychology service website with high (versus low) content quality and design quality would report higher levels of perceived initial trust and treatment acceptability. Second, there would be an interaction between the content quality and design quality of the website in determining participants’ perceived initial trust and treatment acceptability, such that participants assigned to the low (versus high) quality content conditions would be most likely to rate the services as
trustworthy and/or acceptable if the design quality were high (versus low). Furthermore, participants assigned to review the low (versus high) design quality conditions would be most likely to rate the services as trustworthy and/or acceptable only if the content quality were high (versus low). Third, those who reported more favorable (versus less favorable) attitudes toward the Internet would rate telepsychology websites as more trustworthy and acceptable. Lastly, those who reported more favorable (versus less favorable) attitudes toward psychotherapy would rate telepsychology websites as more trustworthy and acceptable (see Figure 1).
CHAPTER 3
METHODODOLOGY

Participants

The participants for this study were volunteer students from the University of Central Missouri (UCM). Participants could obtain credit for undergraduate psychology courses at the discretion of their instructors. All participants were at least 18 years old at the time of participation and were recruited online through UCM’s electronic research participation website, SONA (https://ucmo.sona-systems.com). According to a G-power analysis, approximately 128 participants would be required to obtain the desired power of 0.80, critical $F(3, 173) = 2.66$, to detect a medium effect size of $\eta^2 = 0.25$. However, a post-hoc G-power analysis of the obtained sample of 120 participants indicated an achieved power of $(1 - \beta \text{ err prob}) = 0.77$. This was considered by the researcher to be an acceptable obtained power and the sample size ($N = 120$) was determined to be sufficient. After data collection, data from three participants were removed from the sample because these participants did not review the website they were assigned, resulting in a final sample of $N = 117$.

Information collected on the demographics survey indicated that the total sample included approximately 60% females ($n = 72$) and 40% males ($n = 47$), whose ages ranged from 18 to 50 years ($M = 20.8, SD = 4.29$). Based on information reported by participants, the sample was approximately 75% Caucasian, ($n = 87$), 12% African American ($n = 14$), 6% Asian ($n = 7$), 6% Hispanic or Latin American ($n = 5$) and 3% of Middle Eastern descent ($n = 3$). Information collected regarding frequency of Internet use indicated that 94% of the participants ($n = 110$) used the Internet daily, 85% ($n = 99$) used search engines such as Google daily, and 86% of respondents indicated that they used Facebook, Twitter or another form of social media daily.
Materials

**Pilot study and creation of artificial websites for the study.** To develop the materials for the current experimental study, the researcher conducted a content analysis of existing websites ($N = 63$) offering online mental health services, counseling services, or telepsychology to assess the extent to which current online service providers were including the information content within their websites that is recommended by the APA’s (2013) *Guidelines for the Practice of Telepsychology* (Hancock et al., 2016). These data were later used in designing the fictitious websites used in the current study, in hopes of approximating what consumers might be likely to encounter in the “real-world” when searching for online therapy services.

The pilot study entailed analyzing the sample of online mental health service websites to evaluate the content of each site using a checklist that was developed based on the APA’s (2013) *Guidelines for the Practice of Telepsychology*. All websites were found through searching on Google.com using keywords such as “Online life coaching,” “Online counselling services,” and “Online therapy.” The websites were evaluated using a 38-item ethical checklist based on the APA’s (2013) *Guidelines for the Practice of Telepsychology* (see Appendix A). For each of the eight guidelines, several criteria were described within the checklist; if the website provided information that satisfied the guideline’s criteria, then the item was checked as present on the list and scored as a one versus zero if the item was not present. Each website was assigned a total score based on how many items were checked as “present” on its respective evaluation. Therefore, a higher score represents a website that contains more information with respect to the APA’s Guidelines (2013). Information regarding the aesthetic quality, operations and maintenance, and relevance of the content were also recorded and analyzed.
Descriptive statistics were used to determine the extent to which the websites adhered to the APA’s (2013) guidelines. Information was also collected related to the demographic characteristics and credentials of the service providers, as well as the functional quality and appearance of the websites to determine which sites looked and worked the best. Overall, the highest scoring website met approximately 80% of the checklist criteria. On average, the websites reviewed for the pilot study addressed 39% of the checklist criteria (Hancock et al., 2016). The information obtained through the pilot study was used to create four artificial websites based on the real-life websites’ designs and content to maximize the validity and generalizability of the results of the current study. For the present study, this information was also used to operationally define content quality as, “the degree to which a website includes specific information that is relevant, useful, reliable, accurate and specific to the services depicted within the website,” (i.e., content quality was determined by both the amount and specificity of the information included within a website). The websites created to represent the “high” content quality conditions included approximately 90% of the information suggested by the APA (2013) and met criteria for 35 of the 38 checklist items. The website created to represent the “low” content quality conditions contained roughly less than 25% of the checklist items. Specifically, the “low” content quality conditions included the information that was most common among the websites reviewed within the pilot study (e.g., full name of the provider, physical location of practice, explanation of the services provided, description of the technologies to be used and information regarding charges and billing). The specific information chosen for inclusion in each website was intended to depict the extremes of each quality condition; this was important to ensure that each website condition truly embodied the quality condition that it was intended to represent.
Prior to the beginning of participant trials, the model websites were evaluated for face validity. To ensure that the levels of the two independent variables (high versus low quality of content and design) were depicted accurately within the four website conditions, four graduate students who were familiar with ethical issues pertaining to psychological practice were asked to evaluate and provide feedback on each model website. The graduate students evaluated each website in terms of (a) content quality and (b) design quality. Using the Website Quality Evaluation Form for graduate student review (see Appendix B), the reviewers provided answers to two questions regarding the (a) overall quality of the website’s design (e.g., did the links work properly; were the features easy to see and read?) and (b) the overall quality of the website’s informational content (e.g., was the information clear and logical; would the information be helping in making an educated treatment decision?). The graduate student reviewers also provided feedback regarding any errors they identified within the content as well as suggestions regarding the design of the websites, all of which were addressed prior to participant trials. Overall, graduate student responses were consistent with the intended conditions with regards to both content and design quality (i.e., the high quality conditions were rated higher than the low quality conditions for both variables).

**Measures.** Previously established instruments were used to measure perceived initial trust (PIT) and attitudes toward the Internet. The General Internet Attitude Scale (GIAS) (Joyce & Kirakowski, 2015) was used to measure the participants’ attitudes regarding the Internet by asking questions such as, *I feel overwhelmed by the Internet* and *The Internet makes me anxious*. Respondents recorded their answers to twenty questions using a 5-point Likert scale, where -2 = *strongly disagree* to 2 = *strongly agree* (see Appendix C). Scores for the GIAS can range from -40 to +40, with higher scores indicating more positive attitudes toward the Internet. For the
present study, internal consistency and reliability were evaluated for the GIAS and demonstrated good internal consistency, Cronbach’s α = 0.82.

The Attitudes toward Seeking Psychotherapy Scale (ASPS) was constructed by the present author to measure participants’ attitudes regarding psychotherapy experiences. The ASPS is a 14-item survey which asks participants to rate several possible phrases that could be used to complete the following sentence “Seeking professional psychological help would…” Responses include phrases such as *Alleviate symptoms of psychological distress* and *Cause concern about what others think of me*. Respondents provided their answers using a 7-point Likert scale ranging from -3 = *strongly disagree* to 3 = *strongly agree* (see Appendix D). Scores for the ASPS scale can range from -42 to +42, with higher scores indicating more positive attitudes toward psychotherapy. For the present study the ASPS demonstrated acceptable internal consistency, Cronbach’s α = 0.72.

The Perceived Initial Trust Scale (PITS) (Li, Jiang & Wu, 2014) was used to measure the first dependent variable, perceived initial trust (PIT). The PITS consists of 4 questions including *The provider appears to be one who would keep promises and commitments* and *Overall, the provider seems trustworthy*, and participants responded using a 7-point Likert scale where 1 = *strongly disagree* and 7 = *strongly agree* (see Appendix E). Scores for the PIT scale can range from 7 to 28, with higher scores indicating a greater perceived experience of initial trust. The PIT scale was also analyzed for reliability and was found to demonstrate good internal consistency, Cronbach’s α = 0.95.

To measure online treatment acceptability (OTA), the present researcher created the Online Treatment Acceptability Scale (OTAS). The OTAS is a 12-item survey consisting of questions such as *I would be interested in receiving this treatment if I was having this type of*
problem and respondents recorded their answers using a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree (see Appendix F). Scores for the OTA scale can range from 12 to 60, with higher scores indicating greater acceptance of the online treatment. For the present study, the OTAS was also found to be highly reliable, Cronbach’s α = 0.91.

Overall scores were generated for the GIAS, the ASPS, the PITS (Tan et al., 2008), and the OTAS by adding the values of items within each scale after reverse scoring items as necessary (see Appendix, C, D, E, and F). The participants also completed a brief demographics survey consisting of several questions regarding their age, sex, gender and Internet use (see Appendix G). For data analysis, the website conditions of the two independent variables, content quality and design quality, were coded as a “1” for low quality conditions and a “2” for high quality conditions.

**Design and Procedure**

Upon arrival, each participant was randomly assigned to review one of the four fictitious websites, by picking a number at random from one of four paper tabs labeled with numbers 1 through 4 (numbers were hidden from the view of participants). Participants were asked to review the assigned website as if they were actual consumers seeking online therapy and then complete a short online survey (using Survey Monkey) regarding their attitudes toward the Internet and psychotherapy, experience of PIT and how likely they would be to accept services from the provider(s). Scores on the PITS and OTAS served as the dependent variables for this experiment and the manipulation of the website conditions served as the independent variable.

Participants were seated in a room containing four numbered computers, corresponding with the numbered paper tabs used to assign participants to each condition. After logging onto the Internet, each participant was directed to Survey Monkey (http://www.surveymonkey.com/).
The participants were provided with a printed copy of the electronic informed consent form which was read aloud by the researcher (see Appendix H). After reviewing the informed consent documents, the researcher asked participants if they had any questions before the study began. If the participants agreed to participate, they were asked to electronically indicate so by clicking “Yes, I agree to participate.” on the informed consent page; no identifying information was collected on the informed consent document. The printed copy of the informed consent was the participants’ to keep. Next, participants were instructed to begin the survey by providing answers for the first two surveys, the ASPS and GIAS. Once these measures were completed, each participant was given up to 30 minutes to evaluate the website they were assigned to review. The participants were instructed to follow any links that were provided and watch any videos that were included within the content of the website as well as download any available documents; however, they were not allowed to leave the web page (to visit other sites, check their personal email, etc.) for any reason except to discontinue participation. This was monitored by the current researcher or a research assistant who was present in the research room during the evaluation period. After the allotted time for review had elapsed, or the participant had finished his or her review, they were asked to provide answers based on their review of the website. Specifically, participants were asked to provide answers to surveys regarding their (c) perceived trust and their likelihood of (d) accepting treatment from the service provider depicted by the website (i.e., the PITS and OTAS, respectively). This was followed by a brief demographics survey and completion of a manipulation check (see Appendices G and B). At the conclusion of the study, each participant was debriefed regarding the true nature of the study and thanked for their participation (see Appendix I).
Hypotheses Testing and Data Analyses

Hypotheses. After all the data had been collected, hypotheses testing and data analyses were conducted based on the following four hypotheses: First, scores for the PITS and OTAS would differ depending on which model website the participant was assigned to evaluate. Hence, participants assigned to view a website with high content quality would rate a website differently in terms of trustworthiness and/or acceptability than if the content quality were low. Furthermore, participants assigned to view a website with high design quality would rate a website differently in terms of trustworthiness and/or acceptability than if the design quality were low. Second, there would be an interaction between content quality and design quality such that scores for perceived initial trust (PITS) and online treatment acceptability (OTAS) would depend on the level of the quality of the content and design of the website model the participant was assigned to evaluate. Hence, participants assigned to view a website with low content quality would view a website as more trustworthy and acceptable if the design quality were high. In contrast, participants assigned to view a website with poor design quality would view a website as trustworthy and/or acceptable only if the content quality were high. Third, scores on perceived initial trust and online treatment acceptability would differ depending on the participants’ attitudes toward psychotherapy. Lastly, scores on the PITS and OTAS would differ depending on the participants’ attitude toward the Internet, as measured by the ASPS and GIAS, respectively.

Data analysis. To test the four hypotheses, the data were analyzed using a 2 (quality of website content, low or high) x 2 (quality of website design, low or high) between-subjects factorial multiple analysis of covariance (MANCOVA) to determine the main effects of both quality factors (a) content and (b) design, and any interactions that might emerge between them.
This analysis also accounted for any covariance in PITS and OTAS scores that might be accounted for based on the participants’ attitudes toward the Internet and psychotherapy. Additionally, a multiple regression analysis using Pearson’s product-moment correlation coefficient (Pearson’s $r$) was conducted to determine whether or not the participants’ acceptance of the depicted services could be accurately predicted by the participants’ reported experience of perceived initial trust while also accounting for other predictors, such as quality of (a) content, (b) design and attitudes toward (c) the Internet and (d) psychotherapy. This process parses out the amount of unique variance within treatment acceptability that could be accounted for by perceived initial trust alone and combined with any other significant predictors.
CHAPTER 4
ANALYSIS AND RESULTS

Before the data were analyzed, statistical assumptions were evaluated to ensure that the data did not violate any of the assumptions necessary to run the desired analyses. All measurements were scored on Likert-type scales and the collected data were interval or ratio level, an appropriate type of data for the planned analyses. The experimental design was fully between-subjects, meaning the observations from each participant were independent of each other. Homoscedasticity was evaluated by examining the scatterplot between predicted values and residuals. The scatterplot indicated an approximately equal spread of residuals (see Figure 2). Independent errors were examined through evaluation of the Durbin Watson value, which was 2.05, meaning this assumption was met as the value was close to 2.0. Normality of errors was evaluated by examining a histogram of residuals, which appeared to be normally distributed; therefore, this assumption was met. The assumption of multicollinearity was assessed through the evaluation of the VIF, which was close to one for all predictor variables, meaning this assumption was also met. Homogeneity of variance between groups was assessed by examining the Levene’s test for each dependent variable. Levene’s test was significant for PIT but not for OTAS; therefore, equal variances were assumed for OTAS, but not for PIT.
Figure 2

*Regression Line and Normal Probability Plot Predicting Online Treatment Acceptability*

*Note.* Predictor variables: PIT, GIA

**Manipulation check**

To ensure that the conditions of the independent variables were accurately represented by the model websites, a manipulation check was conducted to verify that the websites were perceived by the participants as intended. Data from the two question manipulation check survey (see Appendix B) were analyzed using two one-way between-subjects analysis of variance (ANOVAs) comparing website conditions and perceived quality (see Table 1).
Significant differences were found among reported means for the four website conditions for the perceived quality of the content, \( F (3, 113) = 12.02, p < 0.001 \), as well as the perceived quality of the design \( F (3, 113) = 8.99, p < 0.001 \).

Table 1

*Analysis of Variance Between Website Conditions and Perceived Quality*

<table>
<thead>
<tr>
<th>Variable</th>
<th>( df^* )</th>
<th>( F )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Quality</td>
<td>3</td>
<td>12.02</td>
<td>&lt; 0.001**</td>
</tr>
<tr>
<td>Design Quality</td>
<td>3</td>
<td>8.99</td>
<td>0.40</td>
</tr>
<tr>
<td>Total</td>
<td>116</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*df, degrees of freedom
**Statistically significant at \( p < 0.01 \)

An additional comparison of means across the four website conditions determined that the websites designed to be “high” in content quality (website conditions 2 and 3) had the highest mean scores for perceived content quality (\( M = 3.56, SD = 1.13 \) and \( M = 3.88, SD = 0.65 \), respectively). The means for the websites designed to be “low” in content quality (website conditions 1 and 4) were significantly lower (\( M = 2.46, SD = 1.02 \) and \( M = 2.52, SD = 1.31 \), respectively). Similar comparisons were conducted to evaluate websites designed to be “high” in design quality. Indeed, websites created to be “high” in design quality (website conditions 3 and 4) yielded the highest mean scores (\( M = 4.07, SD = 0.84 \) and \( M = 3.32, SD = 1.27 \), respectively). Furthermore, the websites designed to be “low” in design quality (websites 1 and 2) yielded the lowest means scores (\( M = 2.442, SD = 1.14 \) and \( M = 3.29, SD = 1.17 \), respectively). These
results suggest that the websites were perceived by the participants as they were intended with regard to both content and design quality.

**Hypothesis Testing**

Hypotheses one through four were evaluated using the results of a two-tailed 2 x 2 MANCOVA comparing the effects of the independent variables, content quality (high versus low) and design quality (high versus low), as well as two covariates (attitudes toward the Internet and toward psychotherapy) on the dependent variables (PIT and OTAS scores) (see Table 2). Hypothesis one was evaluated by examining the effect of content quality (high versus low) for scores on the PITS, $F(1, 111) = 29.62, p < 0.001$, and OTAS, $F(1, 111) = 14.37, p < 0.01$. The results indicated that there was a significant main effect of content quality for both PITS and OTAS scores. Pairwise comparisons indicated that participants provided higher PITS ratings for websites of high ($M = 21.12, SD = 8.55$) versus low ($M = 14.95, SD = 8.92$) content quality as well as higher OTAS scores for websites that contained high ($M = 26.22, SD = 9.67$) versus low ($M = 21.31, SD = 10.06$) content quality (see Figures 3 and 4). Content quality was determined to have a significant effect on both dependent variables and, therefore, this aspect of hypothesis one was supported.

Hypothesis one was further evaluated by examining the effect of design quality (high versus low) for both PITS and OTAS scores. Design quality was not determined have a significant effect on OTAS scores ($F = 2.40, p = 0.124$), nor was it found have a significant effect on PITS scores ($F = 1.34, p = 0.249$). Pairwise comparisons determined that there were no significant differences in PITS scores for high ($M = 18.74, SD = 8.76$) versus low ($M = 17.40, SD = 8.76$) design quality websites. Likewise, there were no significant differences in OTAS scores for high ($M = 24.778, SD = 9.90$) versus low design quality conditions ($M = 22.76, SD = 9.90$)
9.92). Therefore, there was not a significant main effect of design quality for either dependent variable and this aspect of the first hypothesis was not supported. Although hypothesis one was not fully supported, content quality did have significant effect on both PITS and OTAS scores (see Figures 3 and 4).

Figure 3

*Plot of the Estimated Marginal Means for Online Treatment Acceptability*
Hypothesis two was evaluated by assessing the interaction between content quality and design quality on PITS and OTAS scores. The interaction between content quality and design quality was not significant for scores on the PITS, $F(1, 111) = 0.713$, $p = 0.40$, or OTAS, $F(1, 111) = 0.00$, $p = 0.992$ (see Table 2). Therefore, this hypothesis was not supported.

Hypothesis three was evaluated by examining the effect of reported attitudes toward the Internet as a covariate. Attitudes toward the Internet was determined to have a significant effect on both PITS scores, $F(1, 111) = 6.27$, $p = 0.014$, and OTAS scores, $F(1, 111) = 11.79$, $p < 0.001$ (see Table 2). Therefore, hypothesis three was supported.
Hypothesis four was similarly evaluated by examining the effect of attitudes toward psychotherapy as a covariate. Although attitudes toward psychotherapy was approaching significance for PITS scores, $F(1, 111) = 3.17, p = 0.078$, it was not found to be a significant factor for OTAS scores, $F(1, 111) = 2.17, p = 0.14$ (see Table 2). Therefore, this hypothesis was not supported.

Table 2

*Multivariate Effects of Content and Design Quality on Perceived Initial Trust and Online Treatment Acceptability*

<table>
<thead>
<tr>
<th>Variable</th>
<th>ANCOVA 1</th>
<th>ANCOVA 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df*</td>
<td>$F$</td>
</tr>
<tr>
<td>Content quality</td>
<td>1</td>
<td>29.616</td>
</tr>
<tr>
<td>Design quality</td>
<td>1</td>
<td>1.342</td>
</tr>
<tr>
<td>Content * Design (interaction)</td>
<td>1</td>
<td>0.713</td>
</tr>
<tr>
<td>Internet attitude (covariate)</td>
<td>1</td>
<td>6.269</td>
</tr>
<tr>
<td>Psychotherapy attitude (covariate)</td>
<td>1</td>
<td>3.173</td>
</tr>
<tr>
<td>Error</td>
<td>111</td>
<td></td>
</tr>
</tbody>
</table>

*df, degrees of freedom

**Statistically significant at $p < 0.01$
Additional Analyses

**Multiple regression.** A forward stepwise multiple regression was performed with PITS scores, content quality, design quality, and attitudes toward the Internet and psychotherapy as predictor variables and OTAS scores as the outcome variable. Attitudes toward the Internet and psychotherapy as well as content and design quality were excluded from the first model. The regression equation (OTAS = 0.751 * PITS + 10.255) accounted for a significant amount of variance among OTAS scores, $F (1, 114) = 103.191, p < 0.0001$, adjusted $R^2 = 0.47$ (see Table 3 and Figure 2). As shown in Table 3, PITS scores in the first model accounted for 47% of the variance among OTAS scores. Attitudes toward the Internet were added into the equation for the second model and accounted for an additional 2% of the variance among OTAS scores. Overall, the second regression equation (OTAS = 0.712 * PITS + 0.112 * GIAS + 9.802) accounted for 49% of the variance among OTAS scores, $F (1, 114) = p < 0.0001$, adjusted $R^2 = 0.49$. Thus, PITS ($t = 9.54, p < 0.001$) and attitudes toward the Internet ($t = 2.26, p = 0.03$) were significant predictors of OTAS scores, and there was a strong, positive relationship between PITS and OTAS scores ($r = 0.69, p < 0.001$) and a moderate correlation between attitudes toward the Internet and OTAS scores ($r = 0.304, p < 0.001$); see Figures 5 and 6.
Table 3

*Summary of Multiple Regression Analysis Models for Online Treatment Acceptability Scores (N = 117)*

<table>
<thead>
<tr>
<th>Model</th>
<th>t</th>
<th>p</th>
<th>β</th>
<th>F</th>
<th>p</th>
<th>R</th>
<th>adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PIT</td>
<td>10.158</td>
<td>&lt; 0.001</td>
<td>0.688</td>
<td>103.191</td>
<td>&lt; 0.001</td>
<td>0.688</td>
</tr>
<tr>
<td>2</td>
<td>PIT</td>
<td>9.541</td>
<td>&lt; 0.001</td>
<td>0.652</td>
<td>55.975</td>
<td>&lt; 0.001</td>
<td>0.704</td>
</tr>
<tr>
<td></td>
<td>ATI</td>
<td>2.256</td>
<td>0.026</td>
<td>0.154</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Predictor variables: content quality, design quality, attitudes toward the Internet (IA) and psychotherapy, and perceived initial trust (PIT).

Figure 5

*Scatterplot Describing the Relationship Between Perceived Initial Trust and Online Treatment Acceptability*
Figure 6

*Scatterplot Describing the Relationship Between Attitudes Toward the Internet and Online Treatment Acceptability*
CHAPTER 5
DISCUSSION

Previous research has shown that consumer perceptions of trust and technology acceptance have a significant impact on consumer behavior related to e-commerce (Tan et al., 2008, Davis, 1989). Davis (1989) was able to successfully predict consumer acceptance of technology, including e-commerce, using the technology acceptance model (TAM). The current research suggests that the principles of the TAM may be used to explain potential consumer behavior related to the acceptance of telepsychology services. To the best of the author’s knowledge, this study is the first to examine the possible influence of several factors that affect consumer evaluations of the quality of a telepsychology website, including the website’s content and design (Beck, 1997; Grigoroudis et al., 2008; Khawaja & Bokhari, 2010; Lui et al., 2009; Tan et al., 2008), both of which have been previously shown to impact user satisfaction and trust of comparable e-commerce sites offering services such as public access to government services and retail (Ahn et al., 2007; Green & Pearson, 2011; Koufaris, 2002; Pavlou, 2003; Tan et al., 2008). Tan and colleagues (2008) provided further evidence of the TAM’s versatility in explaining e-commerce by evaluating the TAM’s ability to predict consumer evaluations of public service websites as a product of perceived initial trust. Tan et al. (2008) demonstrated that trust is a good predictor of user acceptance of e-government service websites. Furthermore, Tan et al. (2008) concluded that the quality of websites significantly impacts the degree to which citizens develop trust in public e-services.

Based on previous findings, it seemed logical that these principles could be used to predict the effect of the quality of a website’s content and design on the perceived initial trust of an online service provider, and furthermore, to predict online treatment acceptability related to telepsychology services. The current research aimed to integrate the principles identified as
important to predicting online consumer behavior in previous research (e.g., Beck, 1997; Davis et al., 1989; Grigoroudis et al., 2008; Khawaja & Bokhari, 2010; Pavlou, 2003; and Tan et al., 2008) to develop a novel conceptual framework for predicting online treatment acceptability by applying the TAM to telepsychology services.

The current research also explored not only a website’s content and design quality, but also how one’s attitudes toward the Internet and psychotherapy were related to perceived initial trust and treatment acceptability of advertised telepsychology services. The former covariates were examined in the current study to determine if attitudes toward either the Internet or psychotherapy would account for any additional variance in online treatment acceptability scores which might have been unexplained by content quality, design quality or perceived initial trust.

The results did not support all four hypotheses. However, as predicted, content quality did affect both PIT and OTA. Specifically, participants rated websites high (versus low) in content quality more positively on measures of both perceived initial trust and treatment acceptability. Design quality, however, was not a significant factor in affecting either PIT or OTA. We can conclude from these results that content quality does have a causal effect on participants’ reported experience of PIT and OTA. In contrast, contrary to prediction, the present findings suggest that design quality does not significantly impact PIT or OTA.

The second hypothesis predicted a significant interaction between content quality and design quality on PIT and OTA; however, this hypothesis was not supported. The aim of this hypothesis was to determine whether or not participants who were assigned to review a website low in content quality would be more likely to rate the service as acceptable if the website were high in design quality. It was anticipated that participants could have been swayed to rate less informative websites (i.e., low content quality) as offering more acceptable services if the
website employed a high quality design, whereas participants assigned to review websites with poor design quality would only find the services depicted as trustworthy and/or acceptable if the content quality were high. This prediction was not supported by results of the MANCOVA and suggests that participants consistently preferred websites that were high in content quality, regardless of the website’s design. This finding is heartening as it suggests that users may be less easily swayed by the design of a website than was expected. One possible explanation for this finding may be that the elements employed in the website conditions which were intended to manipulate the website’s content quality (e.g., including information related to informed consent, confidentiality, billing, and outcome data) more accurately represented the elements valued by consumers, whereas the elements intended to manipulate the website’s design quality (e.g., usability, image quality, functionality of links and downloads) might not have been the most relevant in the user experience of website quality. Perhaps future researchers should try manipulating other design factors, such as animation and style, to determine if design elements other than those manipulated in the current study are more important in affecting consumer PIT and OTA.

The third and fourth hypotheses were evaluated by examining the interaction between attitudes toward the Internet and psychotherapy as covariates in explaining PIT and OTAS. Attitudes toward the Internet were determined to have a significant impact on both PIT and OTAS, which supports the third hypothesis. Although the results of the MANCOVA determined that the relationship between attitudes toward psychotherapy and PIT was approaching significance, attitudes toward psychotherapy was not a significant predictor of OTA. Therefore, the fourth hypothesis was not supported. The results of hypotheses three and four suggest that internet savvy respondents, who hold more favorable attitudes toward the Internet, are more
likely to accept telepsychology services and will rate them as more acceptable than are less savvy users. Based on the present findings, the same cannot be inferred about attitudes toward psychotherapy in general. One possible explanation for this finding may be that online therapy is less subjected to the stigma associated with traditional therapy. That is, the increased anonymity associated with receiving services online might reduce the negative connotations associated with seeking traditional therapy services. Alternatively, it is possible that the measure of this construct (attitudes toward psychotherapy), which was designed specifically for the present study, was not a good measure of this construct. Although the Attitudes toward Seeking Psychotherapy Scale demonstrated acceptable internal consistency, other psychometric properties of this scale have not been established.

A step-wise multiple regression was performed with PIT, content quality, design quality, and attitudes toward the Internet and psychotherapy entered as predictor variables and scores on a measure of OTA as the outcome variable. The first regression equation revealed that PIT accounted for the largest amount of variance in OTAS scores, accounting for 47% of variance in OTAS scores. The overall model, containing PIT and IA, accounted for nearly 50% of the variance among OTAS scores, suggesting that the conceptual model is a good predictor of OTA.

As a result of the experimental manipulation and random assignment of participants to independent website conditions, causal inferences can be drawn from the differences in observed responses. For example, it can reasonably be concluded that a causal relationship exists between content quality, with regard to both perceived initial trust and online treatment acceptability. Furthermore, the strong positive correlation between scores on measures of PIT and OTA ($r = 0.69$) supports the relationship and directionality described by the conceptual framework outlined in Figure 1.
The results of the present study have successfully answered the question set forth by the title of this paper: *Do quality websites matter?* The results of this study suggest they do, at least with regard to the quality and breadth of the content provided. Even in the presence of a poorly designed website interface, participants preferred websites with higher quality informational content (i.e., websites that contained a vast amount of information specific to depicted services). These results contribute novel insights adding to the body of research regarding the factors that affect perceived initial trust and treatment acceptability with regard to consumer perception of telepsychology websites (e.g., Davis et al., 1989; Khawaja & Bokhari; Mahue et al., 2012 and Tan et al., 2008). For example, although previous research found that perceived initial trust might be influenced by the quality of the content within similar e-commerce websites (such as online retail and government websites), it was previously unknown whether or not those findings could be successfully applied to consumer perceptions of telepsychology services; the present study suggests they can.

These results also have valuable implications for consumers and providers of online mental health services. For example, conclusions drawn from the results of this study could be used to provide guidance to practicing telepsychologists who wish to create websites that provide the kind of information their clients find valuable. By developing telepsychology sites that better address the needs of potential clients, providers may be able to create a more satisfactory online therapy experience. Specifically, the present study suggests that those who offer telepsychology services might develop more effective websites for advertising their services by including a breadth of information regarding the services they provide (e.g., information regarding informed consent, limits to confidentiality, charges and billing, outcome data, and educational credentials).
A comparison of the results of previous research that has examined the content of websites advertising telepsychology services (e.g., Henlen et al., 2003; Hancock et al., 2016; Shaw & Shaw, 2006) and the present findings, suggests that there is a discrepancy between what many providers are including within the content of their websites and what consumers value. The results of the present study revealed that informational content was a salient factor in a participant’s evaluation of a telepsychology website; however, the results of previous studies indicate that many websites are not including such information. This implies that consumers are not being met with the informational content they find desirable. The disparity between what consumers want and what they are presently being offered may become more problematic as the use of technology in general increases and the demand for telepsychology services continues to rise (ITU, 2016; Mahue et al., 2012). In general, the present findings suggest that the quality of a website’s content does impact consumer decisions regarding whether to seek telepsychology services from a given provider and could have important implications for telepsychology providers as they design their websites. However, some limitations ought to be considered with respect to the present study, as is discussed in the following paragraphs.

**Limitations of the Present Study**

This study has provided valuable information about the relationships that exist among PIT, OTA and the quality of telepsychology websites. However, it is important to note that the results of this study are still subject to certain limitations. For example, the data that were analyzed were based on the responses of volunteer college students from a midsized, mid-western university. As such, the sample of participants may not be truly representative of the population of potential telepsychology consumers in the general population. For instance, the present sample of college students enrolled in psychology courses might be more educated and
more knowledgeable about psychology and/or psychotherapy in particular, as compared to the
average consumer searching the web for telepsychology services. An additional limitation is the
self-report nature of the measures used to evaluate attitudes toward the Internet and
psychotherapy. Self-report measures can be problematic due to possible memory distortion and
the fact that participants are not always honest in their responses.

It is also important to acknowledge that the websites created for this study were based on
data collected during a pilot study which took place several months prior to data collection for
the present study. Given the constantly changing nature of websites available on the Internet, it
is difficult to determine whether or not the websites used in this study were truly representative
of what is available to consumers online at the present time. Also, the websites created for the
present study were designed to represent two extremes (low versus high) of content and design
quality, whereas “true” websites might be more likely to fall somewhere in between these
extremes with regard to these factors.

Suggestions for Future Research

Given that this study was the first of its kind, attempts to replicate the present study seem
warranted. Replication of the present study would provide support for the generalizability of the
current results, with regard to the impact of the content and design quality of websites on
consumer perceptions of perceived initial trust and treatment acceptability. Researchers may
also want to investigate the potential impact of the amount of informational content on PITS and
OTAS. The present study defined content quality as a product of both the amount and specificity
of the information included within a website. Thus, varying the amount of information included
within the websites may have unintentionally confounded the present results. That is, it is
possible that including a greater amount of information in the high quality content conditions
may have influenced consumer perception of the websites in unconsidered ways (e.g.,
participants may have rated websites that contained a vast amount of information as higher in quality than websites that contained very little information, regardless of the specificity of the content). As such, future research may seek to control for the effect of the amount of information by including similar amounts of information in both the high and low quality content conditions.

Studies similar to the present study but involving individuals who might be most inclined to seek telepsychology services (e.g., military personnel, individuals with limited mobility, and those in rural, isolated areas) might be especially informative with regard to identifying factors that impact consumer perceptions of telepsychology websites. Future studies could also utilize alternative measures of attitudes toward psychotherapy and manipulate other aspects of design quality in an attempt to examine further some of the unexpected results, such as the finding that neither attitudes toward psychotherapy nor design quality were significant predictors of perceived initial trust or online treatment acceptability. Such research might provide valuable insight regarding unexplained and potential unconsidered factors that influence consumer behavior regarding the acceptance of telepsychology services.
References


Hancock, S. L., Stark, K., & Kreiner, D. (2016, April). *Website adherence to APA guidelines for the practice of telepsychology*. Poster session presented at the Graduate Symposium of the University of Central Missouri, Warrensburg, MO.


## Appendix A: Ethical Checklist used for website evaluations

<table>
<thead>
<tr>
<th>Guideline</th>
<th>Ethical Checklist : Please check the boxes below if the website include the listed information, if the information is not included in the website then leave the box unchecked</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1: Competence of the provider</strong></td>
<td>Provider strives to take reasonable steps to ensure their competence with both the technologies used the potential impact of the technologies on all involved parties.</td>
</tr>
<tr>
<td>☐ Does the website provide the full name (First and last) of provider?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website indicate the state of practice of the provider?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide educational credentials for the provider (E.g. Ph.D., Psy.D, Ma)?</td>
<td></td>
</tr>
<tr>
<td>☐ Do they list educational experience specific to telepsychology?</td>
<td></td>
</tr>
<tr>
<td>☐ attending seminars/workshops</td>
<td></td>
</tr>
<tr>
<td>☐ review of literature</td>
<td></td>
</tr>
<tr>
<td>☐ continuing education programs</td>
<td></td>
</tr>
<tr>
<td>☐ supervised experience</td>
<td></td>
</tr>
<tr>
<td>☐ Other: ________________________</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide appropriate links for credentials?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide information regarding their competence or specific training regarding the technological modalities used?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website include a statement of how telepsychology could affect the client provided?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide information regarding what to do in the case of an emergency (e.g., hotlines/emergency resources for suicide risk)?</td>
<td></td>
</tr>
<tr>
<td><strong>2: Standard of care in the delivery of telepsychology services is upheld</strong></td>
<td>Provider makes effort to ensure that ethical and professional standard of care and practice are met at onset and throughout treatment</td>
</tr>
<tr>
<td>☐ Does the website include a statement that online treatment isn’t suitable for every client (e.g., not appropriate for certain situations, such as suicidality, recurrent crises)</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide information regarding specific technology to be used is provided? If so please list:</td>
<td></td>
</tr>
<tr>
<td>☐ video teleconferencing (e.g., Skype)</td>
<td></td>
</tr>
<tr>
<td>☐ telephone</td>
<td></td>
</tr>
<tr>
<td>☐ text</td>
<td></td>
</tr>
<tr>
<td>☐ email</td>
<td></td>
</tr>
<tr>
<td>☐ social networking sites</td>
<td></td>
</tr>
<tr>
<td>☐ use of multimedia applications (e.g., diaries to keep record of progress; use of fitbits, etc)</td>
<td></td>
</tr>
<tr>
<td>☐ other (Specify): __________</td>
<td></td>
</tr>
<tr>
<td>3: Informed consent</td>
<td>Provider strives to obtain informed consent which address unique concerns regarding services</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>☐ Does the website provide a statement is provided regarding informed consent procedure?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide a statement that clients must be 18 years or older, or have parental consent, to be eligible to receive service?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide a physical location (i.e. Country, State or region) of the practice?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide contact information for the physical location of the practice?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website describe the anticipated response time (e.g. how fast will the provider respond to client inquires)?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide information regarding how clients’ identities will be verified?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide information regarding charges and billing?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website provide information regarding limits to confidentiality (e.g. suspected child abuse, intent to seriously harm themselves or others)?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4: Confidentiality of data and information</th>
<th>Providers makes effort to protect and maintain confidentiality of data and information</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Is there a statement regarding risk of confidentiality breaches specific to use of technology (e.g., risk of others, such as hackers, obtaining access to email communications)?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website describe security measures that are utilized to ensure confidentiality of the clients identify?</td>
<td></td>
</tr>
<tr>
<td>☐ Does the website mention potential risks and benefits of dual relationship through social networks (e.g., Facebook, Twitter)?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5: Security and transmission of data</th>
<th>Provider takes appropriate steps to</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Does the website mention security measures in place to protect clients testing information and data</td>
<td></td>
</tr>
<tr>
<td>6: Disposal of data and information</td>
<td>Disposal of data, information and technologies post-service is utilized in a manner to protect personal information</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>□ Does the website describe how data will be disposed of so as to protect client privacy/confidentiality?</td>
</tr>
<tr>
<td></td>
<td>□ Does the website describe methods they use to avoid risks of inappropriate or incomplete disposal of data and material (e.g., by permanently deleting data, cleaning out cookies, etc.)?</td>
</tr>
<tr>
<td>7: Testing and assessment</td>
<td>Provided has considered issues with testing assessment approaches that will be utilized through the service</td>
</tr>
<tr>
<td></td>
<td>□ Does the website provide information regarding specific testing methods or procedure that will be used during intake or throughout treatment?</td>
</tr>
<tr>
<td></td>
<td>□ Does the website include credentials that qualify the provider to administer such measures (e.g., Licensed behavior analysis, licensed neuropsychologist)?</td>
</tr>
<tr>
<td></td>
<td>□ Does the website provide information regarding accommodations for culture or ethnic requirements of the client (i.e., different languages that may be used)?</td>
</tr>
<tr>
<td></td>
<td>□ Does the website include statement regarding possible complications of testing/assessment conducted via telepsychology (e.g., client having access to information online regarding tests being used; possible distractions while completing tests; differences in results obtained when tests are administered in person versus via telepsychology;)?</td>
</tr>
<tr>
<td>8. Interjurisdictional practice</td>
<td>Provider is familiar with and complies with relevant laws and regulations in both the jurisdiction of the service provider and the client.</td>
</tr>
<tr>
<td></td>
<td>□ Does the website provide a statement regarding related laws and jurisdiction where provider is located? (e.g., informs client that laws might differ between state in which client resides versus therapist’s location; e.g., how limitations to confidentiality might differ between these two jurisdictions?)</td>
</tr>
<tr>
<td></td>
<td>□ Do they provide international services?</td>
</tr>
</tbody>
</table>
Appendix B: Evaluation Form used for graduate student review and manipulation check of website conditions

Website Quality Evaluation Form

Instructions: After you have finished reviewing the website, please circle the answers to the following questions that you feel most accurately describes the website you reviewed.

1. Please indicate the overall quality of the website’s design (i.e., do the links work properly; are the features functioning properly; is the content easy to see and read; does the format appear to be consistent, etc.).

<table>
<thead>
<tr>
<th>Extremely Poor</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Extremely Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

2. Please indicate the overall quality of the website’s informational content (i.e., is the information presented in a clear, logical manner; would the information help you to make an educated decision about whether or not to use their services; is there a sufficient amount of information, etc.).

<table>
<thead>
<tr>
<th>Extremely Poor</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Extremely good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix C: General Internet Attitude Scale (GIAS)

General Internet Attitude Scale (GIAS)

Please answer questions 1-4 on the following 5-point scale ranging from -2 to +2 indicating your agreement to the following statements: (-2 = Strongly disagree; -1 = Slightly disagree; 0 = No opinion; 1 = Slightly agree; 2 = Strongly agree)

I feel bewildered by the Internet

-2   -1   0   1   2

I feel overwhelmed by the Internet

-2   -1   0   1   2

The Internet makes me anxious

-2   -1   0   1   2

The Internet makes me uncomfortable

-2   -1   0   1   2

The Internet does not threaten me

-2   -1   0   1   2

I feel at ease using the Internet

-2   -1   0   1   2

I feel disheartened at the idea of using the Internet

-2   -1   0   1   2

The Internet makes me feel annoyed

-2   -1   0   1   2

The thought of going on the Internet is exciting to me

-2   -1   0   1   2
<table>
<thead>
<tr>
<th>Statement</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would like to stay on the Internet for as long as I can</td>
<td>-2</td>
</tr>
<tr>
<td>The idea of going on the Internet gives me a thrill</td>
<td>-2</td>
</tr>
<tr>
<td>The Internet makes a great contribution to human life</td>
<td>-2</td>
</tr>
<tr>
<td>The use of the Internet is enhancing our standard of living</td>
<td>-2</td>
</tr>
<tr>
<td>The Internet is bringing us in to a new era</td>
<td>-2</td>
</tr>
<tr>
<td>The Internet makes a positive contribution toward society</td>
<td>-2</td>
</tr>
<tr>
<td>The Internet is responsible for many of the good things we enjoy</td>
<td>-2</td>
</tr>
<tr>
<td>The Internet makes life more efficient</td>
<td>-2</td>
</tr>
<tr>
<td>The Internet is harmful to people</td>
<td>-2</td>
</tr>
<tr>
<td>The Internet is dehumanizing to society</td>
<td>-2</td>
</tr>
<tr>
<td>The Internet can cause health problems</td>
<td>-2</td>
</tr>
</tbody>
</table>

*Note.* All items scored on a 5-point Likert’s scale (-2 = strongly disagree; 2 = strongly agree). Reverse scored items: 1, 2, 3, 4, 7, 8, 18, 19, and 20.
Appendix D: Attitudes toward Seeking Psychotherapy Scale

Attitudes toward Seeking Psychotherapy Scale

Please answer questions 1-14 on the following 7-point scale ranging from (-3) – (+3) indicating your agreement with the following statements by circling one of the following answers: (-3 = Strongly disagree; -2 = Moderately disagree; -1 = Slightly disagree; 0 = No opinion; 1 = Slightly agree; 2 = Moderately agree; 3 = Strongly agree)

Seeking professional psychological help would…

1. Alleviate symptoms of psychological distress.
   
   -3 -2 -1 0 1 2 3

2. Make me feel like I cannot deal with problems on my own.
   
   -3 -2 -1 0 1 2 3

3. Help me to understand why I feel Distressed.
   
   -3 -2 -1 0 1 2 3

4. Help me learn to cope with my feelings
   
   -3 -2 -1 0 1 2 3

5. Be expensive
   
   -3 -2 -1 0 1 2 3

6. Be time-consuming
   
   -3 -2 -1 0 1 2 3

7. Increase my self-esteem
   
   -3 -2 -1 0 1 2 3

8. Cause concern about what others think of me
   
   -3 -2 -1 0 1 2 3
9. Prevent further psychological distress
   -3 -2 -1 0 1 2 3

10. Cause me to confront painful feelings and issues
   -3 -2 -1 0 1 2 3

11. Result in my seeing an incompetent mental health professional
   -3 -2 -1 0 1 2 3

12. Give me an objective opinion about my concerns
   -3 -2 -1 0 1 2 3

13. Give me a safe place to communicate my feelings
   -3 -2 -1 0 1 2 3

14. Improve my relationship with others
   -3 -2 -1 0 1 2 3

*Note.* All items scored on a 7-point Likert’s scale (-3 = strongly disagree; 3 = strongly agree). Reverse scored items: 2, 5, 6, 8, and 11.
Appendix E: Perceived Initial Trust Scale (PITS)

Perceived Initial Trust Scale (PITS)

Please answer questions 1-4 on the following 7-point scale ranging from 1-7 indicating your agreement with the following statements: (1 = Strongly disagree; 2 = Moderately disagree; 3 = Slightly disagree; 4 = No opinion; 5 = Slightly agree; 6 = Moderately agree; 7 = Strongly agree)

The provider appears to be one who would keep promises and commitments

1 2 3 4 5 6 7

I believe in the information that this provider has provided for me

1 2 3 4 5 6 7

I trust that this provider will keep my best interest in mind

1 2 3 4 5 6 7

This provider is trustworthy

1 2 3 4 5 6 7

Note. All items scored on a 7-point Likert’s scale (1 = strongly disagree; 7 = strongly agree).
Appendix F: Online Treatment acceptability Scale (OTAS)

Online Treatment acceptability Scale (OTAS)

Please answer questions 1-8 on the following 5-point scale ranging from -1-5 indicating your agreement with the following statements: (1 = Strongly disagree; 2 = Slightly disagree; 3 = No opinion; 4 = Slightly agree; 5 = Strongly agree)

This is an acceptable form of treatment or therapy

1  2  3  4  5

I would be interested in receiving this treatment or therapy if I was having this type of problem

1  2  3  4  5

I would deny receiving this treatment or therapy if I were asked about it

1  2  3  4  5

I would trust a mental health professional offering this form of treatment or therapy

1  2  3  4  5

If I were experiencing a problem in my life right now, I would feel confident that I would find relief in this form of treatment or therapy

1  2  3  4  5

I would recommend this form of treatment to a friends who was having this type of problem

1  2  3  4  5

If I were receiving this treatment I would keep it a secret

1  2  3  4  5
I would interested in receiving this treatment or therapy in the future if I ever experience this type of problem

1 2 3 4 5

Note. All items scored on a 5-point Likert’s scale (1 = strongly disagree; 5 = strongly agree). Reverse scored items: 3 and 7.
Appendix G: Demographics survey

Please answer the following questions as accurately as possible regarding your general demographic information

What is your current age in years? ___________

What is your sex? __________

What is your preferred gender? ______________

Please indicate your ethnicity (circle one)

White

African American

Asian

Middle East

Hispanic or Latino

Other (please specify) __________________________

Prefer not to answer

Please indicate your current education level (circle one)

Freshman

Sophomore

Junior

Senior

Graduate student

Please answer questions 1-2 on the following 5-point scale ranging from 0-4 indicating your frequency of Internet use: (0 = Never; 1 = Less than once every two months; 2 = Once per month; 3 = Once per week; 4 = Daily)
Overall frequency of Internet usage:

| 0 | 1 | 2 | 3 | 4 |

Frequency of Google, or other search engine, usage:

| 0 | 1 | 2 | 3 | 4 |

Frequency of Facebook, Twitter, or other social media website usage:

| 0 | 1 | 2 | 3 | 4 |
Appendix H: Informed Consent Form

INTERNET-BASED SURVEY CONSENT FORM

**Identification of Researchers:** This research is being done by graduate student, Sara Hancock (SLH98890@ucmo.edu), under the supervision of Dr. Kim Stark (Stark@ucmo.edu). We are with the University of Central Missouri.

**Purpose of the Study:** The purpose of this study is to determine factors that are related to consumer behavior regarding telepsychology website interfaces.

**Request for Participation:** We are inviting you to participate in a study factors that are related to consumer behavior regarding telepsychology website interfaces. It is up to you whether you would like to participate. If you decide not to participate, you will not be penalized in any way. You can also decide to stop at any time without penalty. If you do not wish to answer any of the questions, you may simply skip them. Once you submit an anonymous survey, we will not know which survey or test is yours.

**Exclusions:** You must be at least 18 years of age to participate in this study.

**Description of Research Method:** This study involves reviewing a randomly assigned website depicting telepsychological services and then completing a survey about your opinion regarding the website you view. The survey will ask you about your previous experience with the Internet, therapy, and your opinion regarding the website. This study will take about 40 minutes to finish.

**Privacy:** All of the information we collect will be anonymous. We will not record your name, student number, or any information that could be used to identify you. Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties.

**Explanation of Risks:** The risks associated with participating in this study are similar to the risks of everyday life. No compensation will be available in the rare event of harm and no alternative treatments are available if injury or emotional distress occurs. If you do experience emotion distress at any time throughout the course of this survey please contact the UCM Counseling Center location in the East lower side of the Humphreys Building in Room 131.

**Explanation of Benefits:** You will benefit from participating in this study by getting firsthand experience in research.

**Questions:** If you have any questions about this study, please contact Sara Hancock via email (SLH98890@ucmo.edu). If you have any questions about your rights as a research participant, please contact the Human Subjects Protection Program at (660) 543-4624.

Please click the following indicating your choice to be in this study:

- ☐ Yes I agree to participate in the study.
- ☐ No I do not want to participate in the study
Appendix I: Debriefing Statement

At this time I would like to take a moment to thank you for your participation in this study. The purpose of this research is to determine what factors are most saliently related to perception of telepsychology website interfaces, and how those factors may affect consumer behavior regarding online therapy services. Please be aware, that the website that you reviewed was created for the purposes of this research study alone, and is not an actual online counseling service. If you have any questions regarding the nature, purpose, or content of the study you have just participated in, please ask them now.

If you have no further questions regarding your participation in this study, you are free to go. Thank you, again, for your participation. If you do have questions at a later date you may contact Sara Hancock by email at SLH98890@ucmo.edu, or Kim Stark at Stark@ucmo.edu.

Thank you, and have a wonderful day!