Type and Experience of Technology Use on Alliance Development in Email-Augmented Psychotherapy

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THE TYPE AND EXPERIENCE OF TECHNOLOGY USE ON ALLIANCE DEVELOPMENT IN EMAIL-AUGMENTED PSYCHOTHERAPY

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A DISSERTATION
Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy (Interdisciplinary in Disability Studies and Social Work)

The Graduate School
The University of Maine

May 2015

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This study was conducted to describe the type of technology use in email-augmented psychotherapy and to examine the relationship among emergent technology use variables and the therapeutic alliance. Sixty-two adults receiving email-augmented psychotherapy participated. The research design applied quantitative techniques with the use of both a demographic/clinical survey and the Working Alliance Inventory-Short Form and qualitative data collection methods through the use of semi-structured interviews with 41 of the participants. The results of this study provide important findings about the type of and comfort with technology use, specifically for theorizing factors that clinicians should assess in order to guide the integration of technology into their practices to augment face-to-face psychotherapy. While the direct association between working alliance and technology use variables was minimal, testing complex relationships is indicated to provide an empirical basis to inform providers’ contemporary practice harnessing technology to improve treatment access and efficacy. The results reveal information that, when structured, can help providers initiate systematic interview protocols with clients during the process of selecting which communication technology
 mediums might be most beneficial to use to enhance treatment outcomes. Thus, the study highlights the critical need for development of rigorous evaluation instruments to guide therapists in how best to use technology in their practices with the greatest effect.
ACKNOWLEDGMENTS

I would like to thank the five members of my Graduate Committee for their guidance, feedback, patience and commitment to my scholarship over the past four years.

I would like to also thank the counseling professionals who assisted me in recruiting participants for this research and the 62 participants themselves. Without their willingness to share of their experiences, this project would not have been possible.

Finally, I would like to thank my family, my wife Carrie, and children Claire, Collin and Ethan. Their support and encouragement was central to my completion of this degree.
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CHAPTER 1
LITERATURE REVIEW

1.1 Overview

Healthcare services, including mental health interventions that rely on technology are cost-effective, convenient and capable of reaching more people than face-to-face (fTf) interventions (Barak & Grohol, 2011). Nevertheless, research suggests that the efficacy of technology use in treatment is not always consistent across people and context, and that our understanding of the impact of individual and technological variables on treatment outcomes and relationships is at present, inadequate (Barak & Grohol, 2011; Barak, Hen, Boniel-Nissim, & Shapira, 2008).

Contemporary social science/mental health scholarship has focused attention on the degree to which the therapeutic alliance exists and is maintained within computer-mediated treatment. Simultaneously, communication scholars have concentrated on the impact of technology on previously established communication processes within fTf interactions, and to a lesser extent, on the human factors that influence communication effectiveness within computer-mediated communication (CMC) (Walther, 2011).

Because email represents the most commonly and frequently used new media worldwide (PEW, 2013), it follows that its study as an efficacious treatment medium should be among the top priorities. While some research has emerged with regard to email-only psychotherapy and alliance, minimal study has been directed at the use of email in combination with individual psychotherapy, or email-augmented psychotherapy. Additionally, questions as to why, when, how and for whom such a therapeutic
partnership evolves within the computer-mediated psychotherapy medium have yet to be answered within a theoretical context.

The purpose of this research is to identify potent areas of common and disparate ground between the alliance and CMC literature and to provide an empirical basis to inform providers’ contemporary practice harnessing technology to improve treatment access and efficacy. The communication and social science literature forms the theoretical basis for this study, while disabilities scholarship conceptually frames concepts of disability and stigma as they relate to computer-mediated therapy and the importance of the therapeutic relationship within psychotherapy. Each section of this literature review is organized to present contemporary scholarship followed by a synthesis and discussion of its application to the dissertation research agenda.

1.2 Concepts and Definitions

The following section identifies key concepts discussed within the literature review along with their definitions.

1.2.1 Disability and the Medical Model

While there are many progressive definitions of disability, the medical definition of disability is used within this research to delimit the population of study because it is most fitting in the context of psychotherapy. From the medical perspective, disability is defined as an internal, medical-diagnostic phenomenon in which the appearance and/or functioning of the anatomy and physiology of one’s body is viewed as not-normal and therefore in need of examination, diagnosis and treatment (DePoy & Gilson, 2011).
1.2.2 Stigma

Stigma is a common negative, societal-level response towards those with atypical embodied characteristics and also those with diagnosed mental illness (Pescosolido et al., 2010). Stigma is defined as “a socio-cultural process by which members of marginalized groups are labeled by other people as abnormal, shameful, or otherwise undesirable” (Michaels, Lopez, Rusch, & Corrigan, 2012, p. 185).

1.2.3 Therapeutic Relationship, Alliance and Working Alliance

Despite the large quantity of research on the therapeutic alliance, ambiguity remains as to the specific meaning of the concept (Horvath & Bedi, 2002; Horvath, Del Re, Fluckiger, & Symonds, 2011; Martin, Ganske, & Davis, 2000). For the purposes herein, the therapeutic relationship refers to the interweaving of empathy, responsiveness, and the creation of a safe and secure environment between therapist and client, while the therapeutic alliance is one way of conceptualizing what has been accomplished by the proper use of these elements (Norcross, 2011). The working alliance represents a pantheoretical construct that “substitutes the idea that the relationship is therapeutic in itself for the belief that working alliance makes it possible for the client to accept and follow the treatment faithfully” (Bordin, 1979, p. 2). The Working Alliance is defined as: 1) the degree to which the counselor and client mutually endorse and value the counseling goals; 2) the tasks necessary to reach the goals; and 3) the bond between them (Horvath & Greenberg, 1989).
1.2.4 Computer-Mediated Communication and e-Therapy

Computer-mediated communication (CMC) is defined by Spitzberg (2006) as any human symbolic, text-based interface conducted or facilitated through digitally-based technologies. Included within CMC are technologies ranging from the internet, mobile texting, instant messaging, email, videoconferencing, and social networking systems. As these technologies are leveraged to deliver mental health care, they have become known as e-therapies which broadly define the delivery of mental health services via email, video-conferencing, virtual reality, chat, or any combination thereof (Sucala, Schnur, Brackman, Constantino, & Montgomery, 2013).

1.2.5 Email-Only and Email-Augmented Psychotherapy

The majority of online psychotherapy is conducted via email, most often within the context of email-only psychotherapy (Chester & Glass, 2006). Within this format, the client and therapist interact with one another using email rather than traditional fTf therapy sessions. In contrast, email-augmented psychotherapy refers to the use of email for between-session communications among clients and psychotherapists as a method of augmenting scheduled fTf psychotherapy sessions.
1.3 The History of Disability

1.3.1 Introduction

The following section provides a historical review of disability and the rise of the medical model as the dominant disability framework within Western cultures. The medical model provides the conceptual and categorical parameters from which the population of study was selected for this research, while consideration the lengthy history of degradation, isolation and exclusion among those with embodied impairments offers a framework for understanding the origins and impact of stigma among those with atypical bodies.

1.3.2 From Antiquity to Contemporary Times

Historical accounts of disability from antiquity to contemporary times establish the conceptual background for understanding the evolution and influence of the medical model as the dominant ‘disability’ framework within western societies. Indeed, historical text establish a clear relationship between assumptions about the degree of one’s health and functioning as influenced by variations in embodied characteristics which were typically compared against the “genre of normalcy” (Titchosky, 2009, p. 78), or within group differences (Schuelka, 2013). Bodies that appeared or operated outside that which was considered typical or normal were described based upon religious and philosophical ideologies of the time (Gomory, Cohen, & Kirk, 2013; Schuelka, 2013). While a detailed chronology of the meaning of impairment over the centuries is beyond the scope of this section, diverse religious frameworks ranging from Christianity (Schuelka, 2013),
Buddhism, to Karmatic ideologies (Matsumoto, 2004) have, to varying degrees, reinforced understandings of impairment as afflictions of evil, or madness, “massive and lasting disturbances of behaviour, emotion, and intellect” (Scull, 2011, p. 3).

The Enlightenment period brought with it capitalistic advances in industrialization, science and societal values promoting nationalism, normality, participation, and production (Scull, 2011). During this period, explanations of atypical bodies transitioned from theological and philosophical paradigms to those of science and medicine with impairment viewed as an internal, embodied pathology (Scull, 2011). Shortly after the Civil War, the U.S. physician emerged as the ultimate medical gatekeeper—the chief source of authority charged with determining who fit into ‘abled’ versus ‘disabled’ categories (Albrecht, 2006). The term ‘disability’ arose as the global classification for embodied impairments, activity limitations and participation restrictions, referring to the negative aspects of the interaction between an individual with a health condition and that individual’s contextual elements such as environmental and personal factors (Leonard, Bickenbach, Ustun, Kostanjsek, & Chatterji, 2006).

1.3.3 Synthesis

The section above provides context in two areas relevant to this dissertation research. Firstly, it frames the historical milieu, which contributed to the emergence of the medical model, or lens, through which categories of human impairments have been classified and responded to medically and socially. The medical model provides the conceptual and categorical basis from which the population of study is selected within this research. The medical model applies the category of disability to those with
medically-diagnosed bodies and conceptualizes disability as an internal phenomenon in which the appearance and/or functioning of the corporeal body is viewed as not-normal and therefore, in need of examination, diagnosis, and treatment. Although theoretical frameworks beyond the medical model exist that situate impairment within a broader context than that of the medical model, such as external environmental perspectives, disability theory (e.g. Bolt, 2005; DePoy & Gilson, 2012; Shakespear, 2006), and posthumanism (e.g. Wolfe, 2010), the medical model definition was used as the frame to identify the participants within this research because it is the most fitting context of psychotherapy. While these perspectives contribute to our understanding of and appreciation for, human diversity compared to more traditional models within the U.S healthcare system the prevailing perspectives about mental health and treatment remain medically influenced to a significant degree.

Secondly, the historical review establishes a lengthy history of degradation, isolation and exclusion among those with embodied impairments. This is critical to our understanding of the concept of stigma, given that, as discussed in the following section, it represents an influential factor affecting the experiences of those who fall into medically diagnosed categories. Stigma can interfere with many areas of one’s life including employment and relationship development (Jahoda & Markova, 2004), reduced self-esteem, feelings of isolation (Cummings & Lau, 2003) and reduced help seeking behaviors (Wrigley, Jackson, Judd, & Komiti, 2005).
1.4 Disability Stigma

1.4.1 Introduction

The following section provides a brief review of stigma and its potential impact on medically diagnosed bodies. The relevance of stigma to this research is discussed along with an overview of a central debate relative to the impact of technology on stigma.

Stigma is defined as “a socio-cultural process by which members of marginalized groups are labeled by other people as abnormal, shameful, or otherwise undesirable” (Michaels et al., 2012, p. 185). Stigma remains a common negative, societal-level response towards those with atypical embodied characteristics and also those with diagnosed mental illness (Pescosolido et al., 2010). The experience of stigma has been one barrier identified by mental health clients that can lead to unwillingness to seek treatment (Ellinstad, Sobell, Sobell, Eickleberry, & Golden, 2006), difficulties maintaining scheduled appointments (Lipman & Boyle, 2007), and poor treatment compliance (Fung, Tsang, Corrigan, Lam, & Cheung, 2007). Brownlee and Cureton (2009) report, individuals with disabled appearances encounter social responses that are different, often negatively so, from their non-disabled peers, with some studies suggesting that people who are labeled as mentally ill, regardless of the type of condition or level of disability, are stigmatized more so than people with other medical conditions (Corrigan, 2000). They are “ostracized because they are imagined to be less functional and therefore weaker than other people” (Oshi, Mitchell, & Van der Loss, 2010, p. 4).
Secondly, contemporary debate ensues in discussions of the benefits and drawbacks of communication technology use within mental healthcare based upon varying opinions about the degree to which it minimizes or potentiates stigma for those with medically diagnosed conditions. Some suggest that technology’s ability to limit communication cues reduces the potential for stigma (Kang, 2000) while allowing for improved treatment access to disenfranchised and otherwise marginalized groups of people (Rees & Stone, 2005). Others counter-argue that technology merely offers an additional route for the transmission of stigmatizing responses to disability (Goggins & Newell, 2003). The sections below present the historical conceptualizations and impact of stigma followed by a discussion of these ideological perspectives.

1.4.2 Historical Conceptualizations and Impact of Stigma

Goffmann (1963) described stigma in general terms as the anticipations and expectations about a group and its members. His conceptualization of stigma included two basic types of embodied markings, those that were obvious and those that were invisible; regardless, both levied negative social valuations. Importantly, invisible stigmatized conditions include medical diagnoses, but also those not visible or otherwise disclosed (Michaels et al., 2012). The impact of stigma can be significant. One’s perception of devaluation and discrimination repeatedly carries a negative impact on one’s psychological wellbeing (Patterson, McKenzie, & Lindsay, 2012).

While there are a number of ways in which mental health professions seek to address stigma such as through the espousal of values to enhance social justice (NASW, 2008), or use of strategies to increase the degree of client engagement in treatment
(Mental Health America, 2010) to name several, others have suggested that a necessary component of successful counseling includes developing effective working relationships between clients and their providers (Horvath & Greenberg, 1989; Newman, 2002). Crosland's (2001) community-based qualitative study adds support to the notion that relationship factors are critical. In a series of individual interviews with 34 people over the age of 16 who were diagnosed with a mental illness, within the context of their experience of stigma within primary care, participants identified a strong and trusting relationship with their provider as integral. While the qualitative methods of the inquiry limit generalizability and the participants were speaking of stigma relative to general medical care, the study sheds light on the possible link between relationship factors and perceptions of stigma. As a result, the question of the degree to which technology influences stigma becomes critical to consider.

1.4.3 Technology's Impact on Stigma

The impact of technology on stigma has been the source of rich scholarly debate within the contemporary literature. Essentially, two positions on this argument emerge. Communication technology proponents suggest that CMC limits the impact of stigma because of the absence of visual cues and the ways in which technology overcomes potential environmental barriers, including geographical barriers (Kang, 2000). To this point, Turkle (2011) offers her observation that text-based communication allows one to "hide as much as you show, [to] present yourself as you wish to be seen...[to] 'process' people as quickly as you want to" (p. 204). Her argument is that technology's ability to allow users to flexibly present or hide personal characteristics within online
communication mediums offers an incredible degree of flexibility to engage, or not engage with others, and to do so with a far greater range of self-presentation than is possible within fTf interactions. Specific to email communication and consistent with this point, Milne (2010) attests that it “liberates interlocutors from their ‘chromosomal makeup’ (p. 3).

Studies have sought to explain the ways in which technology influences stigmatized groups. For example, Rains (2013) examined the implications of online anonymity and stigma in the form of illness-related embarrassment on self-disclosures within the context of health blogging. Using convenience-sampling procedures, health blog authors with Asperger’s Syndrome, asthma, bipolar disorder, depression, or diabetes were invited to complete an online questionnaire. One hundred fourteen, mostly females ranging in age from 18-87, completed the survey. By coding and analyzing the blogs and the use of survey questions designed to operationalize constructs of anonymity and illness-related embarrassment, Rains (2013) concluded that individuals prone to experiencing stigma in the form of illness-related embarrassment may seek some degree of anonymity online and use it strategically to facilitate self-disclosure. Thus, for some, technology can be used tactically to mitigate exposure to negative societal level responses to impairment. Weaknesses of the research design included convenience sampling methods, which limit generalizability to other populations, a small non-representative sample, and lack of design clarity relative to the sequencing of qualitative and quantitative methods and how each informed the other. In addition, as the authors note, they examined a single dimension of stigma, illness-related embarrassment, despite awareness that other dimensions exist.
In a more recent study, similar results were discovered. Reid and Reid (2010) examined mobile texting users to understand the degree to which the medium's affordances led to a benefit and whether psychological predictors differentially influenced this process. They made available an internet questionnaire, which was completed by 645 mobile phone users with a mean age of 23.3 years old. Their findings suggested that young, single and socially anxious mobile phone users were predisposed to take advantage of the social functionality of mobile texting to enrich their relationships. Weaknesses included selection bias of the sample given that the authors discovered it was skewed towards the pervasive age and gender preferences for mobile texting. In addition, because the sample was comprised of mostly college student who were recently separated from their families as they returned to school, they may have been more prone to rely on texting to stay in touch with family during that transition period. As a result, their use of texting may not have been representative of other populations.

Each of the previous studies reflect findings that support the use of specific technologies to mitigate stigma for vulnerable groups with diagnosed mental health conditions. Additionally they share the limitation in their lack of consideration of factors related to the experiences of technology use among participants—an important area of exploration within this dissertation research.

Conversely, scholars have argued that, despite the use of technology for social interaction, stigma is still effectively conveyed and experienced to a significant degree. As Wilson (2006) contends, the removal of the body from social interactions does not
extricate hierarchical relations, and that socially constructed norms, values and attitudes are readily transmitted through CMC just as they are within fTf exchanges.

For example, Tynes, Giang, Williams, and Thompson (2008) examined online interactions among a cross-sectional survey of school-based adolescents to explicate the degree to which discrimination and stigma existed among adolescents and how it affected them. Two hundred and sixty-four students were invited by their teachers to complete online questionnaires. The authors surveyed participants about their experiences of individual, racial and vicarious group discrimination online. In addition, participants completed the Adolescent Discrimination Distress Index and Perceived Stress Scale to measure their experiences of discrimination offline along with several validated instruments to assess depression and anxiety symptomatology. Seventy-one percent of African American and Caucasian adolescents and 67% of multicultural adolescents reported experiencing discrimination within text-based computer-mediated mediums leading the authors to conclude that online discrimination was common and consistent with theories on fTf intergroup bias. Design weaknesses included a small, non-representative sample recruited from a small urban community in the Midwestern United States. In addition, the study design could not account for reporting bias among participants, nor did it include exploration of the nature of experience and patterns of technology use among the participants.
1.4.4 Synthesis

Consideration of stigma is important because it represents a potent response to people with atypical bodies and those who are otherwise perceived as non-normal. When stigma is internalized, it can interfere with one’s self-perception, esteem, social relationships and willingness to engage in, and follow through with treatment. The topic of stigma has been a source of active scholarly debate relative to the degree to which communication technology affects its potency among those experiencing it. At this time, the effect is unclear with evidence supporting both sides of the argument. Some research suggests that stigmatizing responses to disability can and are conveyed through technological mediums as they are within fTf interactions. Other research claims that the added degree of anonymity that technology provides offers some degree of comfort to those who otherwise may experience stigma within non-computer-mediated venues. Because of the potent influence of stigma on individuals with physical or mental impairments, a high priority among mental healthcare providers is to deliver services that limit stigma as much as possible (Sartorius, 2002; WPA, 2001). One such approach that is prioritized by psychotherapists involves the development and frequent monitoring of effective working relationships with clients (Horvath & Greenberg, 1989; Newman, 2002). Recognition of the potential presence and negative influence of stigma within computer-mediated interactions, and the importance of the nurturing healthy relationships with psychotherapy clients, supports the rationale for consideration of the therapeutic alliance within this research.
1.5 Therapeutic Relationship and Alliance

1.5.1 Introduction

The following section provides a transition from the previous discussion of impairment, societal responses to medically diagnosed bodies and the experience of stigma, to a more precise examination of relationships and relationship factors within psychotherapy. The intention is to develop the rationale for this dissertation research agenda, which focuses on relationship factors and technology-use experiences among those engaging in email-augmented psychotherapy.

Within psychotherapy treatment, the therapeutic relationship refers to the interweaving of empathy, responsiveness, and the creation of a safe and secure environment between therapist and client, while the therapeutic alliance is one way of conceptualizing what has been accomplished by the proper use of these elements (Norcross, 2011). The importance of a strong relationship, or ‘alliance,’ within psychotherapy rests in the findings that the therapeutic relationship has been consistently identified as a moderate, but robust predictor of positive outcomes within psychotherapy (Horvath, Del Re, Fluckiger, & Symonds, 2011) and among one of the strongest predictors of treatment success documented by empirical research (Horvath, Del Re et al., 2011; Wampold, 2001). What’s more, counseling professions such as social work, have long maintained that the relationship between client and therapist is essential to the larger change process (Mattison, 2012) and as previously mentioned, a necessary focus to mitigate the potential impact of stigma among clientele.
While the concept of alliance has been one of the most intensely researched topics within the psychotherapy literature, ambiguity remains as to the specific meaning of the concept (Horvath & Bedi, 2002; Horvath, Del Re et al., 2011; Martin, Ganske, & Davis, 2000). It has been suggested that while this lack of clarity may attract a variety of disciplines to the alliance concept, it has also created an obscure landscape within the scholarly research. Definitional ambiguity contributes to the creation of a number of different instruments to quantify the alliance construct (Horvath, Del Re et al., 2011), and potentiates construct validation problems (Hentschel, 2007).

The section below illuminates the ambiguity and complexity of the alliance definition by tracing the development of the alliance concept, while also describing the ways in which it is experienced from the perspective of both the professional therapist and the client.

1.5.2 Professional Definitions

The origins of professional interests in the alliance process can be traced to the psychoanalytic tradition and Freud’s (1912) writings on therapeutic technique and more specifically, psychological transference. Freud observed the client early in treatment experiencing a more intense level of psychological defense to psychotherapy. In subsequent successful sessions however, these defenses reduced and a collaborative process emerged between the client and therapist to jointly uncover and address disturbing material (Horvath, Del Re et al., 2011). It was Freud’s (1912) contention that the development of an effective reality-based transference was essential to effective psychoanalysis and because of this, the analyst should avoid interference and instead,
listen with sympathetic understanding. Sterba (1934) later conceptualized the term ‘ego alliance’ as the client’s internal process for monitoring their ego, which alternated with the experiencing-process within psychoanalysis. Zetzel (1956) referred to the term therapeutic alliance as the client’s ability to rely on the healthy part of their ego to link with that of the analyst to address therapeutic tasks. Rogers (1957) advanced the belief that a healthy therapeutic relationship was a reciprocal venture between client and therapist contending that the therapist must actively cultivate the conditions through which a strong relationship with the client could form, and from which healing could begin. From his perspective, the crucial elements of the relationship involved empathy, unconditional positive regard, and congruence. Later, Greenson (1965) distinguished between the working alliance, or the client’s ability to align with the tasks of the analysis, and to develop a therapeutic bond with them.

During the 1970s, scholars extended the concept of alliance beyond psychoanalysis to include other relational features and therapeutic frameworks (Horvath, Del Re et al., 2011). Lubrosky, Mintz, and Christoph (1979) proposed a two-phase process of alliance development and explained its evolution within treatment using Zetzel’s alliance framework. The initial phase of alliance development marked a point where the client experienced a belief in the therapist’s ability to help, while the therapist provided a supportive and empathetic relationship. The second phase involved the client’s investment in and commitment to, not only the therapist, but also the therapeutic process that included acquiring an understanding of their personal role in the therapy process (Horvath, Del Re et al., 2011).
Bordin (1979, 1989, 1994), in his collaborative relationship model, departed from the psychodynamically-framed concepts of the alliance by conceptualizing key processes of the collaboration between therapist and client that led to effective therapeutic relationships across a number of theoretical frameworks. Bordin distinguished his model from that of Rogers in his emphasis on mutuality between client and therapist, versus one, which focused largely on interpersonal factors (Horvath & Greenberg, 1989). His framework emphasized three processes: 1) the presence of a strong interpersonal bond between the client and therapist who, 2) agreed on the goals to be addressed in therapy, and 3) on the specific tasks to meet them. An important consideration of Bordin's model, especially within his revisions of the 1980s and 1990s, was its emphasis on conscious and collaborative elements of the relationship (Horvath, Del Re et al., 2011). By conceptualizing the alliance as a working alliance, Bordin emphasized collaboration and consensus as opposed to previous conceptualizations, which emphasized the therapist’s contributions to the relationship, or the impact of unconscious distortions (Horvath, Del Re et al., 2011). Horvath and Greenberg (1989) built upon Bordin’s model with their description of the ‘working alliance’ as a bidirectional collection of agreed upon attributes between client and therapist.

Within the past 20 years, researchers have turned their attention from the components of a sound alliance to the concept of alliance ruptures (Safran, Muran, & Eubanks-Carter, 2011). Alliance ruptures are defined as breakdowns in agreements around treatment tasks, goals and the client-therapist bond, or indications of relational tensions between the client and therapist (Safran & Muran, 2006). While in-depth discussion of alliance ruptures is extraneous to this research, it is essential to recognize
that such inquiry has contributed to professional understandings of alliance by advancing awareness of alliance breakdowns and repair. What’s more, the literature on alliance ruptures provides an important variation to the common understanding of alliance as a collaboration. Instead, the concept within this framework is viewed as a shared process of negotiation involving the ongoing dynamic tension of client-therapist affective states, needs, and relational behaviors (Safran & Muran, 2006).

Evident within the above chronology of the alliance concept’s development are a variety of ways in which scholars from diverse schools of thought have attempted to professionally define it, albeit generally, within the psychotherapy process. An additional method of exploring professional definitions of the alliance concept from these diverse perspectives is through a discussion of the common instruments that are widely used in contemporary alliance research.

1.5.3 Alliance Instruments as Definitions of Alliance

The following section provides an overview of the four alliance measures (The California Psychotherapy Alliance Scale, The Helping Alliance Questionnaire, The Vanderbilt Psychotherapy Process Scale, and the Working Alliance Inventory) to delimit the multiple ways in which alliance is measured using instrumentation. Horvath, Del Re et al. (2011), in their meta-analysis of 201 alliance studies relying on over 30 different alliance measures, noted that these four instruments accounted for approximately two-thirds of the data. While each instrument has been in existence for some time and has demonstrated acceptable levels of internal consistency (Martin, Graske, & Davis, 2000), Horvath (2009) reported that their shared variance was less than 50% and that most relied
on an inter-correlation between collaboration, mutuality and engagement. Accounting for
the variability, beyond the definitional ambiguity of alliance, is that each of these
instruments have a number of different versions, including short forms, longer versions
and observer versions. (Horvath, Del Re et al., 2011).

The California Psychotherapy Alliance Scale (CALPAS) is largely based upon
Freud’s (1912) conceptualization of transference and Zetzel’s (1956) conceptualization of
the therapeutic alliance wherein the attachment of the client to, and with, the therapist
was vital, and that the therapist plays an important role in fostering the alliance in
psychotherapy (Gaston, 1994). The CALPAS operationalizes the “therapeutic” alliance
and “working” alliance as two distinct, but related concepts. While the therapeutic
alliance focuses on the affective elements of the attachment to, and collaboration with,
the therapist, the working alliance items emphasize the skillful, collaborative aspects
within therapy.

The Helping Alliance Questionnaire (HAq), (Luborsky, 1976; Luborsky et al.,
1996) is a questionnaire that can be completed by either the client or the therapist.
Conceptually linked to Bordin’s theoretical divisions between goals, tasks and bond, the
HAq quantifies the ‘helping alliance’ with items exploring the collaborative efforts of the
client and therapist, and their stated motivational levels.

The Vanderbilt Psychotherapy Process Scale (VPPS) is designed to assess both
positive and negative client-therapist behaviors and attitudes thought to be salient to the
therapeutic interaction and treatment outcomes. The instrument’s scales reflect diverse
theoretical orientations (O’Malley, Suh, & Strupp, 1983) and include items specific to
client participation, intra-psychic distress, therapist warmth and friendliness, negative attitude, and therapist/client exploration (O’Malley et al., 1983).

It was from Bordin’s model that the Working Alliance Inventory (WAI) emerged (Horvath & Symonds, 1991). The WAI, as the most widely used alliance measure (Hatcher & Gillaspy, 2003; Martin, Graske, & Davis, 2000), will be used within this dissertation research to measure the working alliance construct. The working alliance represents a pantheoretical construct that “substitutes the idea that the relationship is therapeutic in itself for the belief that working alliance makes it possible for the client to accept and follow the treatment faithfully” (Bordin, 1979, p. 2). The working alliance is defined as: 1) the degree to which the therapist and client mutually endorse and value the counseling goals; 2) the tasks necessary to reach the goals; and 3) the bond between them (Horvath & Greenberg, 1989). While alliance can be measured from the perspective of the client, therapist and third-party observer using the WAI, studies have shown that the client and observer perspectives on alliance strength have the strongest correlation with treatment outcomes compared to therapist ratings (Horvath, Del Re et al., 2011) and that this can be accurately measured beyond the second session as a predictor of treatment outcome (Horvath & Symonds, 1991). The WAI yields a global working alliance score along with three sub-scale scores specific to agreement on goals (“We are working towards mutually agreed upon goals”), tasks (“My client and I both feel confident about the usefulness of our current activity in counseling”), and bond (“I appreciate [my client] as a person”).

In summary, the evolution of the alliance concept, including how it has been operationalized through instrumentation, reflects a number of ways in which it is
operationalized professionally. Indeed, most of the research on alliance has focused on
the professional’s definition and experience (Henkelman & Paulson, 2006). As Hentschel
(2007) reminds us, reliance on the construct of alliance as established within instrument-
based definitions creates a cautionary circumstance where the definition becomes what
the instrument measures (Hentschel, 2007). Relying solely on such a limited perspective
dramatically confines our understanding of this complex concept; therefore, attention to
client definitions is also important.

1.5.4 Client Definitions of Alliance

Examining the meaning of alliance from the perspective of the client is critical
(Olivera, Braun, Penedo, & Roussos, 2013). As Norcross (2011) emphasizes,
“psychotherapists who assume or intuit their client’s perceptions of relationship
satisfaction and treatment success frequently misjudge these aspects” (p. 428). What’s
more, evidence exists that the level of agreement between client and therapist on alliance
among widely used measures shows little correspondence (Bachelor, 2013; Bedi, Davis,
& Williams, 2005; Olivera, Braun, Penedo, & Roussos, 2013), and that clients’
observational perspectives on the therapy relationship is the best predictor of outcome
(Orlinsky, Ronnestad, & Willutzki, 2004).

Bachelor (2013) examined how client and therapist views of the therapeutic
alliance differed and overlapped using an exploratory factor analysis with 176 client
subjects and 133 therapist observations. Three alliance instruments were used, the WAI,
CALPAS, and HAq. The analysis involved administering each measure separately and
then in combination with the others. The results indicated a poor correspondence between
participant-derived components and the priori constructs of each instrument. The combined analysis revealed that clients placed greater emphasis on helpfulness, joint participation in the therapy, and negative signs of alliance such as differing views on relevant issues and goals. Conversely, the therapists emphasized the importance of a collaborative working relationship, therapist confidence and commitment, and the client’s working ability. Both therapists and clients shared agreement on the importance of collaboration and participation. The limitations of the study, as noted by the authors, included non-random sample selection procedures, a predominantly female sample and varying levels of therapist experience ranging from 2.5 to 25 years.

Previously published studies suggest that clients desire therapists to be warm, calm, responsive and prepared (Bedi, 2006; Bedi, Davis, & Williams, 2005). They want therapists to show acceptance, confidence, and understanding and to balance questions and comments with listening (Littauer, Sexton, & Winn, 2005).

Bedi, Davis, and Williams (2005) sought to identify specific variables that clients considered critical to form and strengthen a positive therapeutic relationship. They used a critical incident technique with 40 subjects who were asked to participate by way of invitation letters sent to their psychotherapists and postings at local community agencies. Clients identified eye-contact, smiling, warmth, personalized greetings and farewells, and the therapist’s abilities to identify their feelings and to encourage and refer to materials discussed in prior sessions. Interestingly, the clients viewed the psychotherapist as primarily responsible for the quality of the alliance with only 33% of all client participants acknowledging their individual contributions. The authors suggested additional psychotherapist factors may also be important from the client’s perspective.
including the psychotherapist’s age, gender, body type, ethnic background, attire, and the environmental characteristics such as office size, lighting, types of books in the office, decorations, and color themes. The limitations of this study are consistent with qualitative studies.

In another study, Olivera, Braun, Penedo, and Roussos (2013) investigated the client’s perception of the therapeutic relationship using a consensual qualitative approach to analyze a series of interviews with 17 former psychotherapy clients recruited using snowball sampling methods. The authors concluded that within the narratives and phenomenological experiences of the clients, a clear view emerged among most regarding the effectiveness of the treatment and the elements that were of greatest help to them. Former clients contributed comments such as, “I found him [the therapist] kind, nice, simple,…very humane” [participant 10]; I remember his face, his smile and that he transmitted a positive energy with his face” [Participant 3]; “I felt like I was talking to a wall. She sat still, that’s what I felt” (Olivera, Braun, Penedo, & Roussos, 2013, p. 511).

1.5.5 Client Demographic and Clinical Characteristics

As a final phase in the discussion of alliance, a brief overview is provided relative to client demographic and clinical characteristics that influence alliance. The importance of delivering psychotherapy using individualized approaches that account for client characteristics such as age, gender, culture, and other personal preferences is strongly emphasized by professional organizations such as the American Psychological Association (2006). Nevertheless, the ability to make sound claims about the impact of such client factors on the therapeutic relationship is limited. Firstly, research assessing
the client’s perceptions of the therapeutic alliance are rarely disaggregated by gender and other characteristics in part due to researcher reliance on heterogeneous samples within their alliance studies (Martin, 2007; Martin, Garske, & Davis, 2000). Secondly, because of the high degree of variation among ethno-cultural groups, generalizations linking client characteristics to the therapy relationship should be considered with extreme caution (Smith, Rodriguez, & Bernal, 2011). While research exists examining alliance among various diagnostic groups (e.g. Arnow et al., 2013; Barrowclough, Meier, Beardmore, & Emsley, 2010; Bedics, Atkins, Comtois, & Linehan, 2012; McLaughlin, Keller, Feeny, Youngstrom, & Zoellner, 2014; Richardson-Vejlgaard, Broudy, Brodsky, Fertuck, & Stanley, 2013), most have been conducted within the context of specific treatment approaches such as dialectical behavioral therapy and cognitive-behavioral therapy to name several, and not to compare one diagnostic group to another.

1.5.6 Synthesis

The above discussion highlights how diverse theoretical perspectives and instrumentation influence professional definitions of alliance, including perspectives about whom, within the therapeutic relationship, is primarily responsible for its development and maintenance. Horvath and Symonds’ (1991) meta-analysis of alliance constructs found that most relied on an inter-correlation between collaboration, mutuality, and engagement, while Safran and Muran’s (2006) framework of alliance ruptures describes the alliance as dynamic, breakable, repairable and mutually influenced by both therapist and client. Research that expands professional understandings about how clients experience the therapeutic relationship unlocks new perspectives about the concept,
including, but not limited to, therapist’s appearance, professional and personal acumen, perceptions of the helpfulness of therapy, and their ability to balance listening, questioning and commenting. This more granular perspective on alliance, combined with professional definitions, offers a greater perspective on the complexities of alliance while concurrently reflecting potential overlap with communication scholarship focused on understanding CMC.

1.6 Communication Theories and Relationship Formation

1.6.1 Introduction

A predominance of research within the psychotherapy literature has emerged examining the alliance concept, its formation and presence across psychological treatments and increasingly over the past two decades, within e-therapy. Before considering this area of alliance research, exploration of the communications scholarship is important. The primary focus among communication scholars within recent decades has been on the impact of technology on previously established communication processes within fTf interactions and to a lesser extent, on the human factors that influence communication effectiveness within CMC (Walther, 2011). As a central focus of this dissertation research, these frameworks provide the potential theoretical scaffolding on which to base an inquiry as to why, when, how and for whom therapeutic partnerships evolve within computer-mediated psychotherapy. As Donner, Gitau and Marsden (2011) reinforce, we know very little about how people utilize computers and email-capable devices and how they feel in doing so.
The evidence and professional impact of such a gap are highlighted within research by Sucala, Schnur, Brackman, Constantino and Montgomery (2013) who found in their survey of 106 therapists, selected by convenience, that they reported less confidence in their skills to develop alliance in e-therapy compared to within fTf sessions.

1.6.2 Cues-Filtered-Out Theories of CMC

Computer-mediated communication (CMC) theories can be considered within two general categories based upon the degree to which the particular CMC medium is viewed as either an impeding or accentuating factor within the communication processes. Cues-filtered-out models represent a group of theories that posit the lack of nonverbal cues in CMC prevents the capacity for important social functions that involve those cues (Walther, 2011). Examples of cues-filtered-out theories are social presence theory (Short, Williams, & Christie, 1976), and the social identity model of de-individuation effects (SIDE) (Postmes, Spears, & Lea, 1998). Each of these is reviewed and discussed in the sections that follow.

1.6.3 Social Presence Theory

Social presence theory, as one of the first analytic frameworks applied to CMC, has been used to explain communications within video gaming, virtual reality and human-computer interactions. Social presence is a function of the number of cues available within a communication medium (Short et al., 1976) with a linear relationship evolving between the number of cues transmitted, and the degree of presence experienced.
by interactants. It suggests that forms of media exist along a continuum with mediums offering more channels and symbols of communication leading to more relational involvement, warmth and complex communication between parties (Kehrwald, 2008). Within this framework, the concept of presence is considered beyond traditional visual and fTf interactions. Milne (2010) aptly articulates, “presence is an effect achieved in communication (whether by letters, postcards or email, for example) when interlocutors imagine the psychological or, sometimes, physical presence of the other” (p. 3).

A central assumption of social presence theory is that people are more likely to utilize fTf interactions or CMC mediums that offer multiple cues (Stafford & Hillyer, 2012). While social presence theory has been scrutinized in the contemporary literature from the perspective that CMC is not inherently inferior to other communication mediums, it has continued to be applied to understand the role of presence, particularly as it relates to virtual reality and computer-based gaming.

1.6.4 Social Identity Model of De-individuation Effects (SIDE)

Another cues-filtered-out model, the social identity model of de-individuation effects (SIDE), maintains that the absence of non-verbal cues within CMC mediums, specifically its inherent anonymity and physical separation between communicators, deters the expression and recognition of individual characteristics (Walther, 2011). Such a perspective is associated with previous spatial distancing research conducted by anthropologist Hall (1959) who suggested that the distance between communicators influenced the effect and quality of interactions. Theoretically, SIDE does not distinguish between synchronous versus asynchronous mediums (Chan, 2010). In contrast to other
like-category CMC theories however, it offers that, in the absence of social cues, communicators shift to other strategies for developing relationships based on social self-categorization, or how one self-categorizes themselves as a member, or not, of a particular group (Lee, 2004). This orientation to a group supplements for lacking individual-level information of the other communicator, which is obscured by a paucity of non-verbal cues within CMC. This dynamic allows one to identify with others using in-group and out-group perceptions of affiliation such that successful relations are ultimately possible (Chan, 2010).

Carr, Vitak and McLauphlin (2013) examined the rigid dichotomous structure of the SIDE model to inform how members of in-groups viewed members of out-groups and to what degree the bond intensity affected such views. Using a sample of 128 undergraduate subjects, and a 2 x 3 study design, these investigators concluded that participants responded with intensified perceptions of social identity when identity cues were strong and less so when cues were weakened. Conversely, in-group members responded more positively towards out-group members when identity cues were weak versus stronger.

Chan (2010) tested the SIDE model within a field study examining the impact of email as an influential medium. The study consisted of 483 participants who were regular attendees of 29 faith-based groups. Independent variables were organized by communication medium with some participants receiving fTf “calls to action” while the others received the same message using asynchronous email. The authors concluded that in some instances, persuasive messages sent via email could be more influential than those transmitted fTf.
These findings are relevant to the study of email-augmented psychotherapy to the extent that they suggest, within a non-therapeutic context, the degree to which one identifies with the in-group, influences the intensity of their bond to that group. One’s perception of commonality with his/her provider may tend to enhance their perception of bond with that provider, even in a low-cue CMC medium such as email. Is it possible that individuals may seek cues in the form of information on therapist background, shared interests, location, experience and provider style to gauge their perception of alliance bond? Does an individual’s perception of therapeutic alliance strength correspond to the SIDE model’s constructs of in-groups/out-groups, or are these constructs even relevant within a psychotherapy context? These questions will be considered against the narrative data collected within the semi-structured interviews conducted as part of this research.

1.6.5 Cues-Filtered-In Theories of CMC

With the rise of literature explaining both negative and positive experiences and outcomes from CMC, cues-filtered-out models have been trumped by second-generation CMC theories (Walther, 2011) known as cues-filtered-in frameworks. These theories propose that communicators are motivated to affiliate with others and will use whatever social information is available at the time to develop relationships. In the section below, social information processing and hyper-personal theories are discussed followed by communication competence theory, which represents elements from within several CMC theories (Spitzberg, 2006).
1.6.6 Social Information Processing Theory

Social information processing theory (SIP) (Walther, 2009) represents a cues-filtered-in model that seeks to explain the differences between text-based and fTf communication. It recognizes that individuals readily identify the varying capacities for asynchronous CMC mediums to offer specific communication cues. Unlike the cues-filtered-out frameworks, SIP theory posits that individuals will strategically use the cues available to achieve their communication objectives. As a result, the SIP framework posits that CMC relations are not inherently less personal within text-based CMC compared to fTf interactions.

In the absence of communication cues, interactants form impressions of others using textual information (verbiage, style, content, and timing) along with knowledge-generating strategies to test their impressions and successively support or modify them accordingly (Walther, 2011). The result is that while CMC interactions may take longer to develop, ultimately their construction of the other is considered comparable to fTf interactions (Walther, 2011). The SIP framework aligns with the hyperpersonal perspective, discussed below, in its position that communicators in CMC are highly selective in how they construct and then present themselves which in turn, generates a friendlier, less intimidating atmosphere and more personal, even hyperpersonal interaction (Heinemann, 2011).

1.6.7 Hyperpersonal Theory

The hyperpersonal theory of CMC (Walther, 2011) represents another cues-filtered-in model that builds upon SIP theory to explain how people form impressions and
develop relationships on-line despite the absence of visual and non-verbal cues. Its basis is on the recognition that, at times, CMC includes hyperpersonal interactions defined as “forms of interaction that exceed what we may accomplish fTf, in terms of our impression-gathering formation and relational goals” (Walther, 1996, p. 28). The added scope of this theory compared to the SIP framework is in its recognition that, at times, CMC interactions exceed those of fTf relative to their personal nature (Walther, 2011). Such a dynamic is articulated by Milne (2010) who, in describing text-based communication writes, “at times subjects believe the body imagined in these exchanges is more real, more expressive of the writer’s emotions and soul, and this belief may be threatened by the actual body encountered in fTf communication” (p. 3).

Contrary to the SIDE model wherein one’s attraction is their attachment to the group, the hyperpersonal framework posits that beyond group identification, individual stereotypes, personality styles and prior relationships are the impetus for attraction (Walther, 2011). As such, communicators rely on existing stereotypes when formulating impressions of others with writing style, word choice and content used to this end (Walther, 2011). The assumed intention of the message is also important. For example, Jiang, Bazarova, and Hancock (2011) found that disclosure of personal information increases intimacy when the receiver appraises the meaning of the message to be interpersonal. Concurrently, and consistent with observations of Turkle (2011), CMC messages allow message senders to enhance their use of selective self-presentations through implicit text-based strategies such as message content, word choices, and subtle expressions of affinity or disagreement versus explicit statements about and visual displays of, interpersonal affect. Simultaneously, CMC text-based interactions, by virtue
of their specific context, allow for more time and attention in message construction given allowances for time-delays in message responses. In addition, CMC text-based communication provides opportunities for editing and fewer contextual distractions to senders that may otherwise obscure the communication process. What’s more, asynchronous feedback loops within CMC interactions tend to support and thus exaggerate the impact of self-selective presentations and deliberate message construction across interactions (Walther, 2011). From this perspective, leaner forms of communication allow for increased control over messaging and ‘strategic self-presentation by highlighting positive attributes over negative ones (Walther, 2011).

While the hyperpersonal model recognizes that relationship formation using CMC mediums can take more time compared to fTf relationships (Ramirez & Zhang, 2007), the adverse effects of communication are front-loaded at the beginning of the message exchange. As CMC continues and messages accumulate, relationship quality approximates that which is developed and maintained fTf (Walther, 2011).

1.6.8 Communication Competence Theory

Another CMC theory of interest is that of CMC competence (Spitzberg, 2006). Unlike the previous frameworks, this model focuses on the characteristics of the individual versus the CMC communication process alone. As such, it does not fall within either the cues-filtered-out or cues-filtered-in frameworks. CMC competency offers a conceptual model for considering one’s perceived ability to successfully use computer media for communication and thus, one’s acceptance and comfort therein. CMC competence is based upon communicator perceptions relative to four factors: 1)
attentiveness and concern for one’s CMC interaction partner; 2) the ability to actively engage one’s partner while controlling the timing and relevance of communications; 3) emotional expressiveness; and 4) composure by displaying mastery, confidence, and comfortableness as a CMC interactant.

According to Spitzberg, one’s perception of communication competency affects whether they maintain a utopian or dystopian perspective of CMC. Consideration of one’s perception of competency in using technology is consistent with contemporary literature on digital inequality that discourages a focus on technology access as a binary variable, and instead encourages an emphasis on the mediating factors that promote or inhibit use such as technological skill levels among users (Sims, 2013). CMC competence could represent an important element, which helps to inform interviews with psychotherapy clients as to whether email use might or might not be perceived as helpful to them.

As was previously stated, the context of communication represents a variable that affects the process of communication. Concurrently, it is important to note that the majority of CMC research to date has been conducted within informal communication interactions such as romantic and friendship relations such that its generalizability to a psychotherapy context remains limited.

1.6.9 Synthesis

This research project unites and builds upon several disciplines to consider the impact of email communication on sound alliance development within a hybrid psychotherapy treatment approach. Additionally, it seeks to develop knowledge related to
the type of use and experience of technological communication among psychotherapy clients and draws upon the communication literature to provide a contextual basis for the examination. Such an effort, to consider theoretical overlaps across disciplines and to explore the applicability of existing theoretical models within a specific population, is consistent with recommended directions of study. As Walther, Gay and Hancock (2005) articulate, such innovative research “helps us understand the human condition the way we were and always will be, as message-exchanging and meaning-creating creatures, and that alone warrants our attention” (p. 652).

A range of theoretical models exist that explain the process and outcome of CMC. Two general categories of theories are juxtaposed to one another, the cues-filtered-out and cues-filtered-in perspectives. These frameworks strive to explain how the process of CMC changes based upon the technological medium and how interactants adapt to affect relationship development. While cues-filtered-out models recognize that the lack of communication cues dependent on the communication medium limit the extent to which relationships form and are maintained, cues-filtered-in perspectives suggest that communicators adapt to the cues available within a particular medium such that relationships of similar quality develop regardless of whether they are online or fTf.

One significant limitation of the cues-filtered in and cues-filtered-out models previously described, is their focus entirely on the capacity of the technology to transmit communicative cues without considering the diversity in communication skills and abilities across people. While CMC competence considers such a perspective, it has not been expanded to populations who are medically diagnosed. Collectively, the above theories provide a useful context from which to examine the therapeutic alliance concept,
which has not been considered in the literature from the perspective of CMC theories. While cues-filtered-out models offer a perspective for understanding how some may feel inhibited and uncomfortable with CMC, cues-filtered-in models provide a framework for exploring how others may feel less inhibited and more conversant within technological mediums. Similarly, computer competency provides an apt construct for exploring how one’s perceived abilities to use CMC mediums influence their technology use experiences.

The above CMC frameworks will be considered through the qualitative component of this dissertation research design. Participants will be asked to discuss the type of their technology use across contexts, not just within psychotherapy. In addition, they will be encouraged to discuss the ways in which they consider which technology to use, when, and with whom such that constructs from the above philosophies can be considered relative to their degree of fit with technology experiences described within the semi-structured interviews.

1.7 The Use of Email in Treatment

1.7.1 Introduction

The intention of the following section is to begin to meld the theoretical landscape between existent alliance and communication scholarship to inform the field of psychotherapy relative to applications of technology, and specifically email, within practice and to explore its differential effects. As was aptly suggested by D’Arcy, Reynolds, Stiles, Bailer and Hughs (2013), if text-based therapy is to be effective, both
Therapists and clients should experience the alliance in online modalities in a similar way to fTf treatment.

Technologies leveraged to deliver mental health care have become known as e-therapies, which broadly define the provision of mental health services via email, videoconferencing, virtual reality, chat, or any combination thereof (Sucala, Schnur, Brackman, Constantino, & Montgomery, 2013). A review of the literature produces an increasingly large variety of research on technology-delivered treatment and outcomes (Barak, Hen et al., 2008) focused on synchronous and asynchronous internet treatments (Frueh et al., 2007; Greene et al., 2010), interactive televideo (Barak, Hen et al., 2008; Matusitz & Breen, 2007; Mureșan, Montgomery, & David, 2012), robotics (Kramer, Friedmann, & Berstein, 2009; Scassellati, Admoni & Mataric, 2012), virtual chat (Anthony, 2000; Mallen, Day, & Green, 2003; Leff, Williams, Huckvale, Arbuthnot, & Leff, 2013), mobile texting (Pena-Robichaux, Kvedar, & Watson, 2010; Pijnenborg, Withaar, & Brouwer, 2010), and email (Sucula et al., 2012). While discussion of each of these modalities falls outside the scope of this dissertation, in general, the research suggests that the efficacy of technology use within treatment is not always consistent across people and context, and that our understanding of the impact of individual and technological variables on treatment outcomes and relationships is at present, inadequate (Barak & Grohol, 2011; Barak, Hen et al., 2008).

Given the focus on asynchronous email-augmented psychotherapy within this dissertation, a detailed discussion of communication, relationships and treatment efficacy follows specific to that technology medium. The section below provides a rationale.
supporting the need for, and benefits of, research on CMC within the context of
electronic email communication within psychotherapy.

1.7.2 Prevalence of Email Use

Although email represents the most commonly and frequently used new media
worldwide (PEW, 2013), and the majority of online therapy is conducted via text-based
email (Chester & Glass, 2006), its use as a service-delivery medium to enhance treatment
outcomes within the U.S. healthcare system is not routine practice (Dixon, 2010). As far
back as a decade, studies have found that within the United States, 10% of psychologists
communicated with clients through online mediums (Wright, 2002), while a more recent
survey of social workers reported that as few as 3.7% used email frequently for
communicating with clients (Finn, 2006). As such, research on the efficacy of email as a
platform for treatment is relatively minimal (Matthews & Doherty, 2011). One thing is
clear; we can expect such use to increase in the future as technology continues to expand
its reach (Bradley, Hendricks, Lock, Whiting, & Parr, 2011). Therefore, it is imperative
for psychotherapists to closely evaluate the utility of technologies for use in their
practices, or they may find themselves left behind in a healthcare system evolving rapidly
towards full digitalization (Palaez, 2014) and increasing cost controls (Wickramasinghe,
Arias, & Gonzalez, 2014).

1.7.3 Email Use: Costs and Outcomes

Online, computer-mediated mental health treatments have been well touted as
cheaper, location independent (Barnett, 2005), with heightened access to more people
across greater distances than has previously been possible (Muresan, Montgomery, & David, 2012; Marks et al., 2003). Likewise, healthcare services, including mental health interventions that rely on technology are cost-effective, convenient and capable of reaching more people than face-face interventions (Barak & Grohol).

While these points substantiate the possible benefits of adjunctive email use within mental health services and more specifically, psychotherapy, it is crucial to remember the potential barriers that technologies create for individuals with atypical bodies or impairing conditions. While these areas will not be explicated herein, research exists supporting how product designs (DePoy & Gilson, 2011), technology functions requiring abilities to write, read and type (Bloomfield, Latham, & Vurdubakis, 2010), and capitalistic market forces (Gregor, Sloan, & Newell, 2005) also limit technology access and use for some.

1.7.4 Email and Relationships

Scholarly research highlights ongoing debate around several foundational questions related to the ethical, legal and clinical issues involved in the use of email to provide or augment mental health treatment. Despite some evidence to the contrary, one concern relates to the difficulty, or even inability, to establish a strong relationship via text-based communication given the absence of non-verbal cues over the computer (Poeschl & Doring, 2007). To be sure, computer-mediated, asynchronous email communication differs from fTf communication in several ways. For example, and consistent with cues-filtered-out communication frameworks, email lacks the physical presence and the chromatics of traditional communication methods (Doring & Poeschl,
2007). Additionally, it disconnects the speaker from the immediate environment and thus, the social consequences of their actions (Wilson, 2006). Such claims, if accurate, would pose a particular threat to the efficacy of email as a therapeutic tool given scholarly contentions that if text-based therapy is to be effective, both therapists and clients should experience the alliance in online modalities in a similar way to fTf treatment (D’Arcy, Reynolds, Stiles, Bailie, & Hughes, 2013).

Conversely, others claim that email benefits interpersonal relations. As an example consistent with hyperpersonal CMC theory, some perceive email as a more intimate form of communication than using the telephone (Katz, Moyer, Cox, & Stern, 2003) to the extent that some liken email to speech versus writing given its informal tone, spontaneity and volatility (Milne, 2010). Others have suggested that email is more timely (Houston, Sands, Nash, & Ford, 2003), convenient (Leong, Gingrich, Lewis, Mauger, & George, 2005) and so different in context compared to fTf interactions, that it allows for use of a broader range of communicative skills and preferences (Car & Sheik, 2004). As Tonkin (2010) argues, CMC “intensifies interpersonal interactions by transferring them into text-based domains where a whole new scope of human interaction has developed” (p.1). Milne (2010) suggests that in some cases, email “involves the eclipse of the material medium that supports and the temporal or physical obstacles that would otherwise thwart communication” (p. 9).

The following section explores the research findings relative to the use of email as a relationship-enhancing therapeutic tool. It includes the peer-reviewed literature examining the role of the therapeutic alliance in the context of online treatment using
validated alliance instruments dating back to 2002, followed by a discussion of email-
augmented psychotherapy.

1.7.5 Literature Refuting the Alliance-Building Qualities of Email

The predominance of evidence which questions the degree to which the
therapeutic alliance within email therapy evolves to the same degree or better than within
fTf psychotherapy comes less from the findings within individual studies and more
generally from identified methodological limitations of email therapy research to date.
Criticisms include small sample sizes (Prado & Meyer, 2006; Reynolds, Stiles, & Grohol,
2006), homogeneous populations (Cook & Doyle, 2002), or the use of multiple alliance
instruments across studies. Sucala, Schnur, Constantino et al., (2012) conducted a
systemic review of e-therapy research focusing on the therapeutic alliance in which 11
studies, relying on five different instruments, were examined. Their conclusion was that
while the results were promising, the overall volume of e-therapy-alliance literature was
scant and that more research was needed to inform the efficacious use of technology in
establishing an alliance.

Within the literature review conducted from 2002 to the present for this
dissertation research, only one study was identified that reflected results in which email
therapy participants rated the alliance lower compared to other communication
technologies. Cook and Doyle (2002) examined the impact of text and email
communication on alliance strength among 15 mostly Caucasian, college graduated,
female, middle class, adults who participated in online text-only or email-only
psychotherapy with one of five therapists in North America. Client WAI ratings were
compared to those of a sample of 25 fTf psychotherapy clients who participated in the initial validation of the WAI instrument conducted by Horvath and Greenberg (1989). While their findings reflected higher than expected alliance ratings among the online treatment group, they found that clients who primarily used chat versus email reported consistently higher mean alliance scores. In addition, participants who used more than one CMC modality had higher alliance ratings than those who used only one modality. The authors noted that WAI task subscale scores were lower among the online group compared to fTf, hypothesizing that within an online dialogue, there may be fewer task-related steps to accomplish in session such as those related to treatment planning. The weaknesses of this study, beyond a small sample size include the self-selected and homogeneous characteristics of the sample.

1.7.6 Literature Supporting the Alliance-Building Qualities of Email

As previously mentioned, Sucala, Schnur, Constantino et al. (2012) provide one of the most recent and comprehensive systemic reviews of e-therapy applications (including email) and therapeutic alliance. Of 840 studies identified in the initial literature query, only 1.3% examined the therapeutic relationship and of these studies, all relied on text-based therapy versus televised, voice, or chat therapy. They concluded that, while more research is needed, e-therapy does appear to foster the development of a robust therapeutic alliance and like fTf treatment, the alliance is moderately associated with positive treatment outcomes. Nevertheless, across the expanse of e-therapy applications, the authors recognize that the alliance effect and function can be quite diverse across media types and that scrutiny of the process and attention to mediating variables is
critical. Relative to such variables, they cite a study by Knaevelsrud and Maercker (2006) who reported an inverse relationship between pre-treatment symptom severity and e-therapy alliance ratings among 48 participants in a waitlist controlled study involving self-confrontation, cognitive restructuring and social sharing along with therapist instruction and feedback throughout. Clients experiencing more severe anxiety at admission reported weaker alliances with their therapist.

Because this study employed a small sample size, generalizability of findings was limited. Additionally, the authors were not specific about how the therapist feedback process worked and in what form the feedback came (email, mobile texting, voice). The study does, however, lend support to this dissertation research agenda by preliminarily demonstrating that variation in the strength of the client-therapist alliance can occur due to client-level variables, thus reinforcing the importance of understanding for whom email-augmented therapy might be most effective.

Prado and Meyer (2006) and Reynolds, Stiles, and Grohol (2006), in separate studies, examined email therapy using the WAI as a primary instrument. While both studies found moderate to strong therapeutic alliance features among clients using asynchronous email therapy, the sample sizes were small (29 and 17 respectively) and not generalizable.

D’Arcy, Reynolds, Stiles and Grohol (2006) compared client and therapist ratings of both session impact and therapeutic alliance among a sample of 17, mostly female, Caucasian clients participating in email psychotherapy with 16 therapists. WAI ratings were compared to previously published results from ratings of fTf psychotherapy sessions using the Agnew Relationship Measure (ARM-12). The client-therapist dyads
completed a total of 49 matched session ratings. The researchers concluded that among
the pairs, client and therapist alliance ratings were comparable to the control group
ratings, while online therapists rated their sessions as deeper and smoother and felt more
confident about their relationships with their clients compared to the fTf therapists.

In a more recent study, D’Arcy, Reynolds, Stiles, Bailer and Hughes (2013) used
the Agnew Relationship Measure to evaluate client and therapist perceptions of alliance
strength within individual psychotherapy sessions using either email or mobile texting. A
total of 10 therapists and 13 clients were included in the matched pairs analysis. The
experimental group consisted of mostly female, Caucasian, married/partnered individuals
living in the United States. Results were compared to a sample of client alliance ratings
from previously published studies using an aggregate benchmarking strategy. Findings
revealed that text-based therapy participants rated their alliance with providers as high if
not higher than ratings of alliance by a comparable group of clients receiving traditional
fTf therapy. Again, small, homogeneous samples were limiting factors of this study.

1.7.7 Email-Augmented Psychotherapy

While the studies reviewed above focus on email-only psychotherapy, the use of
eemail for between-session client-therapist communication is also intriguing. Email, when
used as an adjunct to fTf psychotherapy, offers the potential to enhance the therapeutic
relationship with clients (Murdoch & Connor-Greene, 2000) and is thought to be one
strategy, among several, that may reduce premature treatment dropout rates among
clients (Aguilera & Munoz, 2011). Not only has this option been cited as attractive to
therapeutic providers compared to other technological applications and strategies
(Wangberg, Gammon, & Spitznogle, 2007), a strong argument exists for the use of asynchronous email communication because of the process of therapy and an understanding of factors that influence client responses to treatment. For example, it has been suggested that use of text-based communication may minimize the potential for early termination of services and sporadic attendance of clients in mental health treatment (Aguilera & Munoz, 2011). Additionally, previous research has shown that treatment gains tend to last as long as the intervention is present and reduce over time (Osterberg & Blaschke, 2005). As such, the use of email psychotherapy may provide a low-cost strategy for providers to use that may assist clients in maximizing their response to interventions, while online between-session communication may enhance opportunities for development of a strong bond between therapist and client (Aguilera & Munoz, 2011).

Herein lies an additional rationale for this dissertation research. Our knowledge about the presence and impact of alliance within email-augmented psychotherapy is relatively unknown. Only a small number of studies exist that preliminary encourage the use of an email-augmented treatment approach. Murdoch and Connor-Greene (2000) presented two case examples in which email was used to provide between-session homework assignments. The authors concluded that for the participating clients, the therapeutic alliance and treatment impact both improved from the provider’s perspective. Furthermore, the authors felt that email provided a safe medium in which clients felt comfortable self-disclosing information about themselves that they might have otherwise avoided. In a second study, Yager (2001) used adjunctive email in the treatment of anorexia nervosa. The author’s findings from this small, exploratory case study
concluded that adjunctive email had “excellent patient acceptability and adherence” to a format of treatment that allowed for “talking on demand” (p. 125) and no reported negative experiences. The study was limited because client feedback was elicited using post-hoc unstructured interviews versus a validated alliance instrument.

1.7.8 Synthesis

A synthesis of the above evidence suggests that, while more research is needed to draw conclusions, preliminary findings suggest that the therapeutic alliance is evident as a variable, even within asynchronous email psychotherapy. Nevertheless, it remains largely unknown how email technology may influence psychotherapy when it is used to augment traditional psychotherapy services provided fTf (Mishna, Bogo, Root, Sawyer, & Khoury-Kassabri, 2012). Moreover, the degree to which the working alliance within email-augmented psychotherapy reflects explanations of relationship development and communication constructs specific to cues-filtered-out and cues-filtered-in models, and communication competence remains unexplored within the published literature. The studies cited above do not explore the nature and use of email, or technology in general, among participants.

A final note is warranted relative to the characteristics of the alliance studies conducted within computer-mediated venues given that existing research uniformly consists of small and homogeneous study samples and the use of a variety of alliance instruments across studies. Collectively, the above characteristics present challenges to the external validity of the research and limit the generalizability of results to populations.
beyond the participant sample. Therefore, larger, meta-analytic studies are needed to address these limitations to external validity.
CHAPTER 2
THE IMPORTANCE OF SYNTHETIC THEORY

As is delineated above, a vast amount of research exists within the communications and alliance literature that seeks to understand interpersonal communication and relationship constructs within CMC. While communication scholars have developed theoretical frameworks to identify relevant variables to relationship formation and maintenance within computer-mediated mediums and to a lesser extent, within academic settings, a paucity of research has heretofore been conducted relative to healthcare settings and with medically diagnosed bodies. Concurrently, study of the therapeutic alliance is emerging, which suggests both the presence and importance of the alliance construct within computer-mediated therapies, yet very limited research has yet been conducted to clarify the processes and variables that may differentially affect sound alliance formation within computer-mediated mediums.

Synthetic theory responds to these knowledge gaps and joins the communication and alliance literature to provide valuable information to psychotherapists to help them understand and consider when, how and with whom CMC might be employed as an adjunct to traditional psychotherapy. With increasing scrutiny related to healthcare costs, significant treatment access barriers within rural geographies, and increasing emphasis on the use of technology to improve healthcare delivery efficiencies, providers who are not able to stay up-to-date on the emerging literature on technology applications, may be left behind. Meanwhile, those remaining abreast will be better informed as they consider
innovative, technology-enhanced service delivery strategies to reduce treatment access barriers and improve psychotherapy outcomes.
3.1 Introduction

The following chapter describes the methodology for this dissertation research examining the type and experience of technology use and its association with perceptions of the strength of alliance among adults, 18 years old and older, receiving email-augmented psychotherapy. Consistent with contemporary research principles and the current level of theory development on this topic, this study relies on a mixed methods research design utilizing both qualitative and quantitative components. This method was chosen because of its foundation in pragmatism and ability to address confirmatory and exploratory research questions simultaneously (Teddlie & Tashakkori, 2009). Consistent with this perspective, the questions guiding this dissertation research are informed by previous study and well defined constructs (alliance) presented in the literature review, yet build on the existing literature to theoretically examine the type and use of technology among a specific population (those with medically diagnosed bodies) receiving email-augmented psychotherapy.

The subsequent sections discuss the following topics:

1. The research questions to be answered
2. The rationale for a mixed methods research design
3. The population of focus and sampling procedures
4. Participant recruitment

5. The rationale for inclusion and exclusion criteria

6. Instrumentation
   a. Development and psychometric testing of the WAI
   b. Demographic and clinical questionnaire
   c. Administration of research instruments
   d. Semi-structured interviews
   e. Transcription and analysis of semi-structured interviews

7. Data analysis by research question

3.2 Research Questions

As has been discussed within the prior chapter, gaps exist within the literature relative to the use of technology in psychotherapy and the degree to which it influences sound client-provider alliance development. Specifically, while some research has emerged relative to email-only psychotherapy and alliance, minimal study of the use of email in combination with individual psychotherapy or email-augmented psychotherapy, has been conducted. Additionally, questions as to why, when, how and for whom such a therapeutic partnership evolves within a computer-mediated psychotherapy medium have yet to be answered within a theoretical context. The following research questions were designed to integrate contemporary alliance research and communication scholarship to explore these areas. The purpose of this research was to identify potent areas of common and disparate ground between the alliance and CMC literature and to provide an
empirical basis to inform providers' contemporary practice harnessing technology to improve treatment access and efficacy.

The study answered the following research questions:

1. What are the demographic and clinical characteristics of adults receiving email-augmented psychotherapy?

2. What is the type and experience of technology use among adults receiving email-augmented psychotherapy?

3. To what degree is a working alliance with the therapist perceived by adults receiving email-augmented psychotherapy?

4. What is the relationship between the type and experience of technology use and the strength of the working alliance and alliance subscales among adults receiving email-augmented psychotherapy?

5. What is the relationship between clinical and demographic characteristics and the strength of the working alliance and alliance subscales among adults receiving email-augmented psychotherapy?
3.3 Rationale for Research Design

Mixed methods research designs transcend what Tashakkori and Teddlie (2011) refer to as the quantitative-qualitative debate in which proponents of each tradition have historically argued for the superiority of their position while dismissing the other. Instead, these scholars advocate for a pragmatic philosophical orientation wherein methods from quantitative and qualitative traditions are used together depending on the nature of the questions being asked and aim of the inquiry. Mixed methods designs allow researchers to gain more in-depth, subtle and complex knowledge about phenomena as they locate the ‘fit’ between quantitative and qualitative methods (Horvath, Johnson, & Onwuegubuzie, 2004) to explore the fit of multiple theories to human experience.

Underlying a mixed methods approach is the assertion that qualitative and quantitative traditions are compatible with one another. In their classic work, Tashakkori and Teddlie (1998) stated that “these similarities in fundamental values include belief in the value-ladenness of inquiry, belief in the theory ladenness of facts, beliefs that reality is multiple and constructed, belief in the fallibility of knowledge, and belief in the underdetermination of theory by fact” (Tashakkori & Teddlie, 1998, p. 13).

Building on these compatibilities, quantitative and qualitative research strategies can be integrated in a number of ways dependent upon the nature of the research questions and query, and the level of knowledge development within the particular area of study. For example, as discussed by DePoy and Gitlin (2011), designs can be integrated in a stepwise process beginning with a qualitative inquiry followed by a quantitative approach for the purpose of understanding the boundaries of a particular construct, or to generate a set of propositions. Conversely, quantitative to qualitative
strategies offer an opportunity to use findings from the first stage to inform additional areas of exploration using qualitative methods. A fully integrated design applies qualitative and quantitative strategies throughout the research process so each informs the other.

As previously mentioned, the pragmatic approach to research emphasizes the particular area of study and the research questions being asked to inform the study design. For example, a researcher may rely on quantitative methods for research questions that seek to extend existing theory into a novel area of inquiry. Concurrently, the researcher may rely on qualitative methods to explore inquiries that do not fit within an existing theoretical framework, where existing theory does not capture the full context of experience within the literature, or the best fit is sought from multiple theories.

3.4 Population and Sampling

The population for this study consisted of adults over the age of 18 participating in email-augmented psychotherapy. Sampling was conducted using purposive, non-random protocols. The principle investigator (PI) recruited six (6) psychotherapists (LCSW, LCPC, PhD) to enlist participants for the study. Each therapist had more than 10 years of experience in providing psychotherapy and was known by the PI to use email within the context of fTf psychotherapy treatment. Each psychotherapist treated up to 12 clients at any given time using email to augment fTf sessions. The study sample was recruited from the participating therapist caseloads (up to 72 clients). This group comprised the sampling frame for this research study.
3.5 Participant Recruitment

Participating psychotherapists were provided with information on the study, its purpose, requirements for client participation, and contact information for the PI. Each provider was asked to introduce the study to his/her current email-augmented therapy clients who met the inclusion criteria and who did not meet any of the exclusion criteria, to inquire if they would be willing to participate. Inclusion criteria were as follows: 1) Capable of understanding and autonomously providing written consent to participate in the research project; 2) 18 years of age or older; 3) Currently participating in psychotherapy in which email is used to augment fTf sessions; 4) Able to speak, read and write English. The exclusion criteria were as follows: 1) Unwilling, or unable to consent to study participation; 2) Currently experiencing any condition that is determined to prevent the individual from clearly, willingly, or knowingly consenting to participate in the research study; 3) Attendance at fewer than two (2) psychotherapy session with current psychotherapist.

Participants were invited to contact the PI by telephone or email to express their formal interest. The PI explained the study to the interested participants over the telephone and provided them with a Participant Consent (Appendix D), which included a written description of the study. Participants were asked to consent to complete both the research questionnaires and to participate in a brief interview. A total of 62 individuals were enrolled. Consent to participate in the study was affirmed by completion of the surveys and interview. Because of the paucity of psychotherapists using email within their clinical practices (Finn, 2006; Wright, 2002), and that the demand for research participants in general continues to exceed the number of individuals willing to take part
participants were compensated $20.00 for their time and effort. This strategy is both supported by the American Psychological Association’s (2010) ethical code and as one that researchers routinely use to encourage research participation (Hanson, Letourneau, Oliver, Wilson, & Miner, 2012). As part of the consent, participants were informed that they could skip any questions to which they were not comfortable responding without affecting their compensation for participation or ability to continue in the study. Participants were asked to complete the WAI and demographic/clinical survey. Additionally, they were asked to volunteer to participate in a brief, semi-structured interview. A total of 41 participants chose to do so.

3.6 Rationale for Inclusion and Exclusion Criteria

The inclusion and exclusion criteria accomplish two important objectives. Firstly, inclusion criteria two (2) and three (3) and exclusion criterion three (3) are consistent with points made by DePoy and Gitlin (2011), that inclusion and exclusion criteria serve to delimit the population to whom the study results are directly related. Secondly, inclusion criteria one (1) and four (4), and exclusion criteria one (1) and two (2), establish the parameters for participation in the research consistent with the guiding principles of research with human subjects; namely, the principles of autonomy and justice. Finally, the rationale for exclusion criterion four (4) rests upon the findings of Horvath & Symonds (1991) that client perceptions of alliance can accurately be measured beyond the second psychotherapy session. Additionally, participants were not excluded on the basis of age, gender, or ethnicity.
3.7 Instrumentation and Quantitative Data Collection

The following section describes the instrumentation used within this research study. Firstly, a demographics and clinical survey was administered to participants to collect demographic and clinical data sufficient to describe the study sample. Demographic data included participant age, gender, employment status, marital status, distance lived from therapist’s office, insured status, highest level of education achieved, number of weekly hours spent communicating with the therapist on-line, and total hours of computer use weekly. Clinical information collected consisted of the number of prior psychotherapy sessions with current therapist, and prior treatment history specific to levels of care ranging from inpatient to none at all.

As discussed within the literature review, the therapeutic alliance is lexically defined as a bidirectional collection of agreed-upon attributes between client and therapist (Bordin, 1979; Horvath & Greenberg, 1989). Within this model, three key elements of a relationship are identified: 1) agreement between client and therapist on the goals of therapy; 2) agreement between client and therapist on the tasks necessary to address the problems brought to treatment; and 3) the quality of the interpersonal bond between client and therapist.

The Working Alliance Inventory-Short Form (Tracey & Kokotovic, 1989) was used as the primary instrument to measure the working alliance construct. This instrument, the most widely used alliance measure (Martin, Graske, & Davis, 2000; Hatcher & Gillaspy, 2003), provides a single alliance score with ascending scores reflecting greater perceived alliance strength between therapist and client using a 7-point Likert-type scale ranging from a score of one (“1”) “Never” to a score of seven (“7”)
"Always.” The aggregate working alliance score represents the average score across all 12 items. The three subscales include 4 items each. The task subscale consists of items 1, 2, 8, and 12, while the bond subscale consists of items 3, 5, 7, and 9. The goal subscale consists of items 4, 6, 10 and 11 with questions 6 and 11 reverse scored, then averaged to obtain each subscale score. The WAI scores (1-7) for each subscale are summed and averaged with higher scores reflecting a stronger alliance for each scale.

The WAI-S provides three subscale scores, each measuring the strength of the alliance based upon the level of agreement between therapist and client relative to the therapeutic tasks, goals and the quality of their emotional bond. Using the WAI-S scoring sheet, total alliance scores and subscales were summed and analyzed as interval-level data, a precedent for which is well established within the literature (Philips & Wennberg, 2014; Webb et al., 2011; Nissen-Lie, Monsen, & Ronnestad, 2010).

3.7.1 Development and Psychometric Testing of the WAI

The Working Alliance Inventory was originally developed as a 36-item questionnaire and then shortened to 12-items by Tracey and Kokotovic (1989). In its original form, the WAI constructs were selected out of a pool of 91 items based upon content analysis conducted by Bordin (1976, 1980) and subsequently reviewed by three psychologists with different theoretical orientations to reduce conceptual and linguistic bias among each item. Items rated with a mean relevance of less than 4.0 were removed from the item pool. The selected experts concurrently classified each item based upon Bordin’s three alliance components: goals, tasks and bond. Using a percentage of agreement calculation for each item, those with less than 70% were eliminated. In the
final phase of construct validation, 21 licensed psychologists were randomly selected from the psychological association roster and asked to rate the remaining 70 items. The 12 highest rated items were retained for use in the WAI.

In subsequent research, Horvath and Greenberg (1989) evaluated results from three alliance studies as a preliminary test of the instrument’s reliability and validity. Pilot testing of the instrument was conducted using 29 graduate students participating in a peer-counseling assignment as part of their counseling psychology program. The instrument was administered after the third session with reliability estimates based upon an item homogeneity index using confirmatory factor analysis ranging from .85 to .88 for the client version and .68 to .87 for the counselor version. Reliability estimates for the complete instrument were estimated at .93 for the client version and .87 for the counselor version using a Cronbach’s procedure. The author’s reported evidence supporting the convergent validity and “tentative indications that, across a variety of treatment orientations, the WAI might perform at least as well as some of the currently used relationship measuring instruments” (p. 231). Subsequent study of the psychometric properties of the WAI have suggested stability over time and good internal consistency (Horvath, 1994).

The shortened version, the WAI-S, developed by Tracey and Kokotovic (1989), was created by identifying the four highest loading items on the 36-item WAI for each of the three dimensions from within the initial confirmatory factor analysis (CFA). A subsequent CFA on the 12 items was conducted followed by pilot testing of the instrument on a sample of 84 university counseling center clients and 15 therapists. The findings supported the validity of the WAI and confirmed a similar factor structure.
between the WAI and WAI-S versions. While alliance can be measured from the perspective of the client, therapist, and third-party observer, studies have shown that the client’s perspective on alliance strength has the strongest correlation with treatment outcomes and that this can be accurately measured beyond the second session as a predictor of treatment outcome (Horvath & Symonds, 1991).

3.7.2 Administration of Research Instruments

Participants were permitted to receive and complete the research questionnaires electronically via email, or in paper form mailed to them by way of the postal service. Those who elected to receive the questionnaires by email were sent an email link to an encrypted survey system, SelectSurvey.NET. Completed surveys were transmitted directly to the PI through the electronic survey platform. Participants who elected to receive and complete paper questionnaires were provided with a postage-paid envelope to return completed surveys directly to the PI.

3.8 Semi-Structured Interviews

The qualitative methods described herein expanded the examination of participant technology use and their experiences of relational elements with their therapists beyond that which the instrumentation (WAI-S) and predetermined survey questions, or priori themes could provide.

Each participant was invited to participate in a semi-structured interview consisting of three open-ended questions: 1) In what ways do you currently use technology for communication purposes? 2) How would you describe your experiences
in using technology for communication? 3) How do you feel about using technology, including email for communication with friends, family, partners and therapist? Probing questions were asked to broaden the context of participant responses to interview questions. Transcripts were created from these interviews and analyzed as discussed below.

3.9 Data Analysis by Research Question

1. What are the demographic and clinical characteristics of adults receiving email-augmented psychotherapy? (Variables of interest are identified in Methods Section below).

To answer question one (1), participants completed a survey to provide demographic information about themselves and information about their current psychotherapy treatment process. Variables of interest were: age, gender, marital status, distance lived from therapist’s office, insured status, highest level of education achieved, number of weekly hours spent communicating with the therapist on-line, and total hours of weekly computer use. Clinical variables were the number of prior psychotherapy sessions with their current therapist and treatment history by level of care ranging from inpatient to none at all. Data were described using frequency and percentages for categorical variables (gender, employment status, marital status, insured status, highest level of education achieved and measures of central tendency for continuous variables (age, number of prior psychotherapy sessions, number of weekly hours spent communicating with the therapist on-line and total hours of weekly computer use).
1. What is the type and experience of technology use among adults receiving email-augmented psychotherapy?

Question two (2) was answered using material collected from within the semi-structured interviews with participants. Telephone interviews were recorded with participant permission using Tape-a-Call Pro version 2.6 and then transcribed using Dragon Dictate version 3.0.3. Thematic analysis was conducted followed by content analysis. The variables identified within the interviews were abductively linked to existing CMC theories, which fit well with the interview data. Abductive reasoning begins with the process of developing explanatory insights followed by the process of making inferences to the best theoretical explanation (Teddle & Tashakkori, 2009) and to corroborate the accuracy of the data (DePoy & Gitlin, 2011).

3. To what degree is a working alliance with the therapist perceived by adults receiving email-augmented psychotherapy?

Mean total alliance ratings and subscale ratings (task, goal, and bond) were calculated for all participants using descriptive statistics (measures of central tendency and shape).

4. What is the relationship between the type and experience of technology use and the strength of the working alliance and alliance subscales among adults receiving email-augmented psychotherapy?
Questions four (4) was answered using data from the WAI-S instrument and participant interviews. Content analytic procedures allowed for the development and quantification of categories of participant experiences of technology use in general and use of email to augment fTf psychotherapy. Numeric scores were assigned to reflect gradations within each category within the chosen communication theoretical explanations. The strength and direction of the correlations between technology use experiences and alliance scores of participants were explored using Pearson’s correlation coefficient.

5. What is the relationship between clinical and demographic characteristics and the strength of the working alliance and alliance subscales among adults receiving email-augmented psychotherapy?

Question five (5) was answered using demographic and clinical data collected using the survey instrument as described under question 3 above and the WAI-S Instrument. Variables of interest were: age, distance from therapist’s office, highest level of education completed and number of weekly hours spent communicating with the therapist on-line. Clinical variables were the number of prior psychotherapy sessions with current therapist and mental health treatment history specific to levels of care. Variables were coded numerically to reflect gradations within each category. The strength and direction of the correlations between demographic and clinical characteristics and alliance scores of participants were explored using Pearson’s correlation coefficient.
CHAPTER 4

FINDINGS

The following section describes the findings of the statistical analysis. Each section is organized and discussed according to the research questions below:

1. What are the demographic and clinical characteristics of adults receiving email-augmented psychotherapy?
2. What is the type and experience of technology use among adults receiving email-augmented psychotherapy?
3. To what degree is a working alliance with the therapist perceived by adults receiving email-augmented psychotherapy?
4. What is the relationship between the type and experience of technology use and the strength of the working alliance and alliance subscales among adults receiving email-augmented psychotherapy?
5. What is the relationship between clinical and demographic characteristics and the strength of the working alliance and alliance subscales among adults receiving email-augmented psychotherapy?

4.1 Introduction

Data were obtained from three sources, the Working Alliance Inventory-Short Form, a participant demographics and clinical survey, and semi-structured telephone interviews. Population and sampling procedures were discussed in the previous chapter.
The surveys were completed on-line using SelectSurvey.Net, or in hard copy based upon the preferences of the study participants. Online survey data was entered automatically into an Excel spreadsheet while hard copy survey data was manually entered into Excel. The data was imported into SPSS 21.0 for subsequent cleaning and analysis. Total alliance ratings and ratings for task, goal and bond subscales were calculated for the total sample using methods discussed in the previous chapter. Using content analysis, six themes were identified within the semi-structured interviews: 1) typical technology use, 2) convenience, 3) utility, 4) technology competence, 5) connection continuum, and 6) trust in privacy. The interview themes were abductively matched against concepts within social presence theory, social information processing theory, hyperpersonal theory and communication competence theory, all of which fitted well with the interview data. Codes were developed to reflect the definitions.

4.2 Definitions and Theories

The definition of communication technology is derived from the communications literature as the hardware and software by which individuals gather, ponder, and exchange information with other individuals (Grant & Meadows, 2013). Hardware and software includes cellular phones, text, instant messaging (chat), internet, email, social media, video conferencing, and other multiuser mediums.

The lexical definition of convenience is developed from the construct of mobility, which has been studied in the context of numerous scholarly fields, including sociology and anthropology (Green, 2002). Scholars have sought to understand the mediating role of technology in structuring the relationship between the individual and his/her social
environment (Green, 2002). According to Ishii (2006), mobility should be considered from the perspective of spatial and temporal mobility. Spatial mobility applies to the concept of physical travel while temporal mobility refers to the degree to which technology speeds up. However, as Green (2002) describes, “the connection between mobile space and time, as articulated in multiple, heterogeneous places and rhythms, is not constant and does not have equal effects for all” (p. 291).

The lexical definition of utility is conceptually linked to Spitzberg’s (2006) motivation construct described within the context of CMC competence theory. User motivation is operationalized as one’s perceived personal benefit of email use with their psychotherapist to enhance treatment efficacy.

Technological competence is lexically defined using Spitzberg’s (2006) construct of knowledge (perceived technological expertise and literacy) within computer-mediated communication competence theory. As discussed in the literature review, the CMC competence model differs from cues-filtered-out and cues-filtered-in models with its focus on the characteristics of the individual versus the CMC communication process alone. CMC competency offers a conceptual framework for considering one’s perceived ability to operate computer media for communication and thus, one’s acceptance and comfort therein (Spitzberg, 2006).

The lexical definition of the connection continuum draws from two theoretical perspectives originating from within the CMC scholarship. Cues-filtered-out and cues-filtered-in perspectives exist as classification systems to explain the extent to which individuals respond to the characteristics of CMC systems and their varying cue systems that differ from fTf communication (Walther, 2011). One’s viewpoint affects both how
individuals use technology and also how they perceive their expressiveness within the context of different mediums (Walther, 2011). Cues-filtered-out models represent a group of theories, which posit that the lack of nonverbal cues in CMC prevents the capacity for vital social functions that involve those cues (Walther, 2011). As a result, and consistent with social presence theory, forms of media exist along a continuum based on the number of channels and symbols of communication available to interactants. The greater the number of communication cues present, the more relational involvement, warmth and complex communication between parties (Kehrwald, 2008). From this perspective, people are more likely to utilize fTf interactions or CMC mediums that offer multiple cues (Stafford & Hillyer, 2012).

In contrast, second-generation communication theories take a cues-filtered-in perspective proposing that communicators are motivated to affiliate with others and will use whatever social information is available at the time to develop relationships. Within this perspective, social information processing theory and hyperpersonal theory acknowledge that individuals identify the varying capacities for asynchronous CMC mediums to offer specific communication cues. As such, individuals strategically use the cues available to achieve their communication objectives and while relationship formation may take longer as a result, CMC interactions can achieve a hyperpersonal intensity such that relations exceed those possible within fTf interaction (Walther, 2011). Collectively, these frameworks provide the scaffolding from which to consider the degree to which individuals utilized email for profound personal communication with their therapist and the extent to which they felt a sense of connection or distance in the process.
The trust in privacy variable reflected the degree to which participants' confidence in the privacy of communication technology influenced their intention to use technology for interacting with others.

While there is no universally agreed upon definition of CMC trust within the scholarly literature (Dimitriadis & Kyrezis, 2010), one conceptualization, based upon the technology acceptance model, views trust as including both cognitive/affective and behavioral components (Dimitriadis & Kyrezis, 2010). Cognitive/affective factors apply to trusting beliefs, while behavioral factors apply to intentions to use technology with the assumption that beliefs lead to attitudes, which in turn influence behavioral intentions and eventually behaviors (Dimitriadis & Kyrezis, 2010). Within this dissertation research, the lexical definition of trust is the degree to which one’s trust in the privacy of technology influences their behavioral intentions to use technology for communication purposes.

The following section describes the findings within the context of each research question.

4.3 Research Question 1: What are the Demographic and Clinical Characteristics of Adults Receiving Email-augmented Psychotherapy?

Demographic and clinical characteristics of adults receiving email-augmented psychotherapy were collected using a demographics survey, which was sent to participants electronically or via the postal service and subsequently returned. Of interest were demographic variables described in table 1 (age, gender, relationship status, insured status, educational level achieved, distance lived from psychotherapist’s office, hours of
computer use communicating with therapist per week, and total number hours using computer per week), and clinical characteristics described in Table 4.1 (history of previous mental health treatments and number of sessions with current psychotherapist).

Table 4.1 Demographic Characteristics of Sample

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<td>Age in yrs, ( \bar{X} ) (SD)</td>
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<td>Gender, No (%)</td>
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<tr>
<td>Male</td>
<td>24 (38.7%)</td>
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<td>Female</td>
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<td></td>
</tr>
<tr>
<td>N</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Relationship Status, No (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>9 (14.5%)</td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>25 (40.3%)</td>
<td></td>
</tr>
<tr>
<td>Never Married</td>
<td>18 (29%)</td>
<td></td>
</tr>
<tr>
<td>Partnered</td>
<td>9 (14.5%)</td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>1 (1.6%)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Distance Lived, No (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10 Miles</td>
<td>17 (27%)</td>
<td></td>
</tr>
<tr>
<td>11-20 Miles</td>
<td>21 (33.9%)</td>
<td></td>
</tr>
<tr>
<td>21-30 Miles</td>
<td>10 (16.1%)</td>
<td></td>
</tr>
<tr>
<td>&gt;30 Miles</td>
<td>14 (22.6%)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Insured Status, No (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Insurance</td>
<td>25 (40.3%)</td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td>20 (32.3%)</td>
<td></td>
</tr>
<tr>
<td>Medicare</td>
<td>11 (17.7%)</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>6 (9.7%)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Education, No (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some High School</td>
<td>5 (8.1%)</td>
<td></td>
</tr>
<tr>
<td>High School Graduate/GED</td>
<td>13 (21%)</td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>21 (33.9%)</td>
<td></td>
</tr>
<tr>
<td>College Graduate</td>
<td>16 (25.8%)</td>
<td></td>
</tr>
<tr>
<td>Advanced Degree</td>
<td>7 (11.3%)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Computer Use/Week with Therapist, Hrs. (SD)</td>
<td>.748 (.917)</td>
<td></td>
</tr>
<tr>
<td>Total Computer Use/Week, Hrs. (SD)</td>
<td>16.62 (13.14)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Treatment History, No (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Inpatient Only</td>
<td>3 (4.8%)</td>
<td></td>
</tr>
<tr>
<td>Inpatient and Psychotropic Medications</td>
<td>6 (9.7%)</td>
<td></td>
</tr>
<tr>
<td>Inpatient, Outpatient and Psychotropic Medications</td>
<td>10 (16.1%)</td>
<td></td>
</tr>
<tr>
<td>Psychotropic Medications Only</td>
<td>5 (8.1%)</td>
<td></td>
</tr>
<tr>
<td>Outpatient and Psychotropic Medications</td>
<td>24 (38.7%)</td>
<td></td>
</tr>
<tr>
<td>Outpatient Only</td>
<td>8 (12.9%)</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>6 (9.7%)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>62</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sessions, No (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3-6</td>
<td>20 (32.3%)</td>
</tr>
<tr>
<td>7-10</td>
<td>17 (27.4%)</td>
</tr>
<tr>
<td>&gt;10</td>
<td>25 (40.3%)</td>
</tr>
<tr>
<td>N</td>
<td>62</td>
</tr>
</tbody>
</table>

### 4.4 Research Question 2: What is the Type and Experience of Technology Use among Adults Receiving Email-augmented Psychotherapy?

Research question 2 examined the type and experience of technology use among adults receiving email-augmented psychotherapy using material collected from semi-structured interviews with participants. A total of 41 (66%) of the participants elected to participate in the interviews in which they were asked about their experiences using communication technologies in general and more specifically, their use of email within the context of psychotherapy. Telephone interviews were audio recorded with participant permission using Tape-a-Call Pro version 2.6 and then transcribed using Dragon Dictate version 3.0.3. Each transcript was reviewed twice to ensure accuracy, once compared to the audio recording, and a second time to correct grammatical errors. Informed by communications theory discussed above, six themes were apparent within the semi-
structured interviews: 1) typical technology use, 2) convenience, 3) utility, 4) technology competence, 5) connection continuum, and 6) trust in privacy.

The interview themes were abductively matched against concepts within social presence theory, social information processing theory, and hyperpersonal theory, all of which fitted well with the interview data. These theories provide useful frameworks for understanding the degree to which a particular CMC medium is viewed as either an impeding or accentuating factor within the communication processes. Finally, the CMC competence model informed our understanding of technology-users’ perceived capabilities to operate the technology and their perceptions of literacy skills in doing so.

Variables of interest and their definitions were identified from within the communication theories to establish a codebook. Transcripts of each interview were read and coded and then reviewed a second time to ensure consistency in the coding process. The definitions and codes for each variable are below followed by the findings for each.

4.4.1 Typical Technology Use

The definition of communication technology is derived from the communications scholarship as the hardware and software by which individuals gather, ponder, and exchange information with other individuals (Grant & Meadows, 2013). Typical technology use comprised descriptions of the multiple technological mediums that participants used and their rank order of preferences for use of each type for general communication purposes.

Two coding strategies were used within this variable. Firstly, nominal codes were assigned based on the types of technology used. Communication modalities were then
ranked based upon each participant’s reported preference for use of each type. Secondly, the total number of communication technologies used by each respondent were summed to allow for a comparison of the range of technologies used across participants.

The communication modalities reported by participants were mobile calling, mobile texting, email, social networking, chatting, video, and blogging. The mean number of technologies used was 4 (SD = 1.01, range of 2-7). Among the technologies reported, preferences for mobile phone calling and mobile texting were the most commonly reported as the first and second choice preferences by 46.3% (N=19 and N=19 respectively) of the sample, while email was reported as the most commonly reported third preference by 18 (44%) participants followed by use of social media which was reported as the third preference by 13 (32%) participants. Video modalities were reported as the second and third preference by 1 (2%) participant each and 8 (20%) participants within the fourth preference category. Chatting was reported as the first preference for 1 (2%) participant, the third and fourth preference by 2 (5%) and 5 (12%) participants respectively. Blogging was reported as the third preference for communicating by one participant (2%). (See Figure 4.1)
The following sections present the technology use variables along with descriptive statistics of participant responses to each. Variables were coded using a Likert scale ranging from 1-4 with the exception of trust in privacy, which was coded dichotomously (1-2). Table 4.3 presents mean and standard deviations of participant ratings for each variable.

**Table 4.3 Descriptive Statistics: Technology Use Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience*</td>
<td>2.683</td>
<td>.9338</td>
<td>41</td>
</tr>
<tr>
<td>Utility*</td>
<td>2.683</td>
<td>1.1054</td>
<td>41</td>
</tr>
<tr>
<td>Competence*</td>
<td>2.854</td>
<td>.7267</td>
<td>41</td>
</tr>
<tr>
<td>Connection*</td>
<td>2.683</td>
<td>1.0826</td>
<td>41</td>
</tr>
<tr>
<td>Trust in Privacy*</td>
<td>1.739</td>
<td>.4490</td>
<td>23</td>
</tr>
<tr>
<td>Number of Communication Technologies Used</td>
<td>4.073</td>
<td>1.0097</td>
<td>41</td>
</tr>
</tbody>
</table>

*Variable scored using 1-4 Likert scale
4.4.2 Convenience

The lexical definition of convenience was derived from the construct of mobility following on Ishii's (2006) suggestion that both spatial (physical travel, access) and temporal mobility (speeds up, synchronicity) are important components.

The variable of convenience reflected how convenient participants felt email was to use compared to other communication technologies (texting, social media, mobile calling, etc.) for general communication purposes. They were asked to describe their opinions of email vis-à-vis accessibility (spatial mobility) and efficiency (temporal mobility) of use. Participants described their perceptions of the convenience of email based upon the availability of a computer (N=5, 12%), and the extent to which email was accessible to them within the context of their busy lifestyles (N=22, 54%). They spoke of the convenience of email in relation to the amount of time spent formulating and typing messages (N=10, 24%), and the immediacy of message exchanges compared to other mediums such as mobile texting, telephone and FTF communication (N=4, 10%).

Codes for this variable ranged from 1-4 (low convenience to high convenience) as follows: 1 = Email is not accessible, nor efficient/immediate compared to other communication options; 2 = Email is not accessible, but more efficient/meets desired immediacy compared to other communication options; 3 = Email is accessible, but inefficient/lacks desired immediacy compared to other communication options; 4 = Email is both accessible and efficient/meets desired immediacy compared to other communication options.

All 41 participants spoke about this variable within the interviews. A total of 6 (14.6%) participants described email as neither accessible, nor efficient for them to use
compared to other communication technologies while 8 (19.5%) described email as not accessible, but more efficient for them to use than other technological options. Twenty participants (49%) indicated that email was accessible to them, but not efficient for them to use compared to other communication options. Seven participants (17%) described email as both accessible and efficient to use.

4.4.3 Utility

The lexical definition of utility is conceptually linked to Spitzberg’s (2006) motivation construct described within the context of CMC competence theory. User motivation was operationalized based upon one’s perception of benefit from email use with their psychotherapist to enhance treatment efficacy. As such, the utility variable reflected the multiple ways that participants used email for communicating with their therapist ranging from those who indicated they could use email, but choose not to, to those who used it for profound and personal communication.

Codes were assigned to reflect communication depth on a 1-4 scale (low-high) as follows: 1 = Do not use email; 2 = Use for scheduling/rescheduling only; 3 = Use for sharing of information/updates; 4 = Use for profound and personal communication.

Utility emerged as a variable within all 41 interviews. Eight (19.5%) reported that they did not use email with their therapist, although they had access to it. Nine (22%) shared that they used email for scheduling and rescheduling appointments, 12 (29.3%) used it for providing informational updates to their therapist, while 12 (29.3%) used email for profound, personal communication.
4.4.4 Competence

Competence is lexically defined within Spitzberg’s (2006) construct of knowledge within CMC competence theory as one’s perceived technological expertise and literacy.

The competence variable emerged within all 41 interviews with participants describing their perceptions of how easy technology was for them to use either due to their ability to effectively use technology or their perceived literacy. Depending upon one’s perceptions of their skills, a range of frustration with communication technology was often described.

Codes ranged from 1-4 as follows: 1 = Perceives self to have insufficient competency; 2 = Perceives self to have sufficient competency and expresses frequent frustrations in using communication technology; 3 = Perceives self to have sufficient competency and does not experience frustrations in using communication technology; 4 = Perceives self to be an expert in using communication technology.

Ten (25%) participants describe their competency in using technology solely from the perspective of their perceived abilities to use the technology while 12 (29%) spoke of their perception of competency based upon their literacy skills relative to writing and grammar. Nineteen (46%) described their perception of competency from both the perspective of technology use and literacy skills.

Two participants (5%) described their competence in using technology as insufficient, while 8 (19.5%) described having sufficient competence, but at the same time, experienced frequent frustrations when using technology. Twenty-five participants (61%) reported having sufficient competence without frustrations reported, while 6
participants (14.6%) described themselves as experts relative to technology use and literacy.

4.4.5 Connection

The lexical definition of the connection variable draws from both the cues-filtered-out and cues-filtered-in theoretical perspectives originating from within the CMC literature. Social presence theory, social information processing theory and hyperpersonal theory provide the scaffolding for the coding strategy below.

Coding was conducted using a scale ranging from 1–4 (low-high) as follows: 1 = Technology as disconnecting; 2 = Technology as limiting connection; 3 = Technology as a bridge between therapy appointments; 4 = Technology enhances relationship or creates a sense of presence.

The connection variable reflected participant perceptions of the impact of email communication on their relationship with their therapist. Such perspectives fit well within the cues-filtered-out and cues-filtered-in theoretical frameworks which, as discussed previously, consider technologies along a continuum from fewer to more communication cues, and the influence of one’s capacity to compensate across mediums to maintain rich engagement. Social information processing theory suggests that forms of media exist along a continuum with those offering more channels and symbols of communication leading to more relational involvement, warmth and complex communication between parties (Kehrwald, 2008).

A range of experiences were described in all 41 interviews from those who found email disconnecting and impersonal to those who felt as if their email communication
was comparable to fTf interactions. Participants discussed their opinions about technology as a disconnecting versus connecting vehicle through which to communicate with others. Eight participants (19.5%) described technology as disconnecting, while 8 (19.5%) described email as limiting connection. Fourteen participants (34%) felt technology functioned as a bridge between them and their therapist, while 11 (18%) went beyond that to discuss technology as a relationship enhancer.

4.4.6 Trust in Privacy

The trust in privacy variable reflected the degree to which participants’ level of trust in the privacy of communication technology influenced their intention to use technology for communication with others. Privacy concerns were discussed in relation to the potential for communications to exist unprotected within cyberspace such that some expressed hesitation to use technology for personal communication. Others voiced an appreciation for the privacy that communication technology afforded because of interactant distance within online communication. For example, they felt more comfortable sharing personal disclosures from a distance than they did fTf.

While there is no universally agreed upon definition of trust within the scholarly literature (Dimitriadis & Kyrezis, 2010), one conceptualization, based upon the technology acceptance model, views trust as including both cognitive/affective and behavioral components (Dimitriadis & Kyrezis, 2010). Cognitive/affective factors apply to trusting beliefs, while behavioral factors apply to intentions to use technology under the assumption that beliefs lead to attitudes, which in turn influence behavioral intentions and eventually behaviors (Dimitriadis & Kyrezis, 2010). Within this dissertation
research, the lexical definition of trust is the degree to which one’s trust in the privacy of technology influences their behavioral intentions to use technology for communication purposes.

A dichotomous coding strategy was utilized as follows: 1 = Trust in privacy of technological communication limits intentions to use technology; 2 = Trust in privacy of technological communication amplifies intentions to use technology.

This variable emerged within 23 (56%) of the interviews. Eight participants (34.7%) discussed privacy concerns in relation to the potential for participant-therapist communications to exist unprotected within cyberspace. Of those participants, six (26%) described hesitations in using on-line technology for personal communications. Fifteen participants (65%) discussed the privacy of technology where communicators were not in the proximity of one another for sensitive communications such that they felt more comfortable self-disclosing. Turkle (2006) tackles this concept in her descriptions of the “reassuring distance” of texting, and the greater degree of “boundness” to the interactant in telephone calling or fTf interaction compared to electronic communication (p. 190).

4.5 Research Question 3: To what Degree is the Working Alliance with the Therapist Perceived by Adults Receiving Email-augmented Psychotherapy?

The Working Alliance Inventory-Short Form (Tracey & Kokotovic, 1989) was used as the primary instrument to measure the working alliance construct as defined in the literature (Hatcher, & Gillaspy, 2007). This instrument provides a single alliance score with ascending scores reflecting greater perceived alliance strength between
therapist and client using a 7-point Likert-type scale ranging from a score of one (“1”) “Never” to a score of seven (“7”) “Always.” The aggregate working alliance score represents the mean score across all 12 items. The three subscales include 4 items each. The task subscale consists of items 1, 2, 8, and 12, while the bond subscale consists of items 3, 5, 7, and 9. The goal subscale consists of items 4, 6, 10 and 11 with questions 6 and 11 reverse scored. The scores (1-7) for each subscale are summed and averaged with ascending scores reflecting increasingly positive perception of alliance for each scale.

The three WAI subscales are: 1) agreement between client and therapist on the goals of therapy; 2) agreement between client and therapist on the tasks necessary to address the problems brought to treatment; and 3) the quality of the interpersonal bond between client and therapist.

The WAI-S total alliance and subscale scores were summed and analyzed as interval-level data, a precedent for which is well established within the literature (Philips & Wennberg, 2014; Webb et al., 2011; Nissen-Lie, Monsen, & Ronnestad, 2010). Measures of central tendencies were computed for total scores and subscale scores (task, goal, and bond) for all participants and presented in Table 4.4. Measures of dispersion and shape (Table 4.5) including graphical depictions (Figures 4.2-4.5) are subsequently presented. Working alliance ratings for each of the subscales were similar across participants ranging from $\bar{X}=6.34$ to $\bar{X}=6.37$. The highest mean scores were within the bond subscale ($\bar{X}=6.37$, SD=.69) while the lowest ratings occurred within the goal subscale ($\bar{X}=6.34$, SD=.58). Large standard deviations ranging from .54 to .69 indicated a high degree of variability among participants. As displayed in the graphical depictions, the alliance and alliance subscale scores reflected platykurtic (negatively skewed)
distributions (ranging from -.716 to -1.024) with a high degree of peakedness towards higher (more favorable) alliance scores (kurtosis range of .098 to -.761). One exception to the above patterns was within total alliance scores, which reflected a negative skew, but a slightly more evenly distributed range of scores (kurtosis .098). These findings are consistent with Hatcher and Gillaspy’s (2006) suggestion that 7-point scaling is not optimal for the WAI because of less discrimination among clients at the lower end of the scale. The Levene’s test was used to test the homogeneity of variances of the total alliance and alliance subscales (Table 4.6). The alliance and alliance subscale scores did not approach the level of significance such that the null hypothesis of equal variances was retained.

Table 4.4 Measures of Central Tendencies: Working Alliance Scores

<table>
<thead>
<tr>
<th>N</th>
<th>Total WAI</th>
<th>Task</th>
<th>Goal</th>
<th>Bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>62</td>
<td>62</td>
<td>62</td>
<td>62</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>6.3593</td>
<td>6.3495</td>
<td>6.3427</td>
<td>6.3669</td>
</tr>
<tr>
<td>Median</td>
<td>6.5000</td>
<td>6.5000</td>
<td>6.5000</td>
<td>6.5000</td>
</tr>
<tr>
<td>Mode</td>
<td>7.00</td>
<td>7.00</td>
<td>7.00</td>
<td>7.00</td>
</tr>
</tbody>
</table>

Table 4.5 Measures of Dispersion: Working Alliance Scores

<table>
<thead>
<tr>
<th>N</th>
<th>Total WAI</th>
<th>Task</th>
<th>Goal</th>
<th>Bond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>62</td>
<td>62</td>
<td>62</td>
<td>62</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Range</td>
<td>2.33</td>
<td>2.50</td>
<td>2.25</td>
<td>2.25</td>
</tr>
<tr>
<td>Minimum</td>
<td>4.67</td>
<td>4.50</td>
<td>4.75</td>
<td>4.75</td>
</tr>
<tr>
<td>Maximum</td>
<td>7.00</td>
<td>7.00</td>
<td>7.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.54034</td>
<td>.64811</td>
<td>.58189</td>
<td>.68610</td>
</tr>
</tbody>
</table>
Figure 4.2 Distribution of Total Alliance Scores (N=62)

![Histogram of Total Alliance Scores](image)

Figure 4.3 Distribution of Task Subscale Scores (N=62)

![Histogram of Task Subscale Scores](image)
Figure 4.4 Distribution of Goal Subscale Scores (N=62)

Figure 4.5 Distribution of Bond Subscale Scores (N=62)
### Table 4.6 Test of Homogeneity of Variance: WAI and Subscales

<table>
<thead>
<tr>
<th></th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total WAI</td>
<td>Based on Median</td>
<td>3.243</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Task</td>
<td>Based on Median</td>
<td>1.239</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Goal</td>
<td>Based on Median</td>
<td>.768</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Bond</td>
<td>Based on Median</td>
<td>3.875</td>
<td>1</td>
<td>60</td>
</tr>
</tbody>
</table>

4.6 Research Question 4: What is the Relationship between Type and Experience of Technology Use and the Strength of the Working Alliance and Alliance Subscales among Adults Receiving Email-augmented Psychotherapy?

Research question 4 used data from the WAI-S total and subscale responses among the 62 participants and those from the interviews with 41 participants to examine the relationship between the type and experience of technology use and alliance strength. See Table 4.7 below.

Mean alliance strength was compared against the variables of convenience, utility, competence, connection, and trust in privacy, which were developed from the content analysis of participant interviews. Associations between total alliance and alliance subscale scores and each of the variables were examined using Pearson’s correlation coefficient. Associations were computed without probabilities given that the non-random sample selection process violated assumptions for probability testing.

In general, the associations between total alliance and alliance subscales (task, goal and bond) ranged from small to moderate, especially between bond scores and perceptions of the utility of email within the psychotherapy process. The utility and bond
variables accounted for the majority of the moderate associations within the correlation matrix.

4.7 Research Question 5: What is the Relationship between Clinical and Demographic Characteristics and the Strength of the Working Alliance and Alliance Subscales among Adults Receiving Email-augmented Psychotherapy?

Research question 5 explored used data from the WAI-S total and subscale responses among the 62 participants and the demographic/clinical variables from the demographics survey. Interval coding of demographic and clinical variables was conducted to reflect consistency between low – high values and least to most variables. Associations were computed without probabilities given that the non-random sample selection process violated assumptions for probability testing.

Associations between alliance scores and the demographic variables of interest reflected small to moderate associations with the most prominent between bond scores, age, and distance lived from therapist’s office. Likewise, of the clinical variables examined, history of mental health treatment, but not number of sessions, was moderately associated with bond subscale scores. In addition, participant hours of weekly computer use communicating with therapist was moderately associated with bond, competence, utility and connection. Age was moderately, positively correlated with total alliance scores and to a slightly stronger degree with bond scores. Task and goal subscales had only small associations with age.
Younger participants tended to use more technologies for communication, expressed higher perceptions of email utility in psychotherapy, competency in using technology in general, and higher levels of trust in the privacy of technology. No relationship between age and convenience was discernable. See Table 9.6 below.
Table 4.7: Pearson Correlations: Demographic, Clinical, Technology Experiences and Alliance Variables

<table>
<thead>
<tr>
<th></th>
<th>Total WAI</th>
<th>Task</th>
<th>Goal</th>
<th>Bond</th>
<th>Age</th>
<th>Number tech. used</th>
<th>Convenience</th>
<th>Utility</th>
<th>Competence</th>
<th>Connection</th>
<th>Trust in privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total WAI</strong></td>
<td>Pearson</td>
<td>.879</td>
<td>.805</td>
<td>.817</td>
<td>.161</td>
<td>-.048</td>
<td>.109</td>
<td>.278</td>
<td>.122</td>
<td>.084</td>
<td>-.068</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>62</td>
<td>62</td>
<td>62</td>
<td>62</td>
<td>62</td>
<td>41</td>
<td>41</td>
<td>41</td>
<td>41</td>
<td>41</td>
<td>23</td>
</tr>
<tr>
<td><strong>Task</strong></td>
<td>Pearson</td>
<td>.879</td>
<td>.634</td>
<td>.569</td>
<td>.090</td>
<td>-.101</td>
<td>.079</td>
<td>.311</td>
<td>.031</td>
<td>.143</td>
<td>-.169</td>
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CHAPTER 5
DISCUSSION

5.1 Introduction

This study explored the type and use of technology and its association with sound alliance development in a sample of 62 adults participating in email-augmented psychotherapy. The mixed methods design utilized both quantitative and semi-structured interview techniques. Two survey instruments were administered to elicit demographic/clinical data and participant perceptions of the strength of their working relationship with their psychotherapist, while semi-structured interviews were conducted with 41 of the participants to ascertain the type and use of technology, and specifically email, in the context of their current treatment. Quantitative data were compiled and downloaded to SPSS 21.0 for further analysis. Interview data were content analyzed with numeric codes entered into SPSS for analysis.

5.2 Limitations

Because this study used a mixed methods design, the rigor criteria from both quantitative and qualitative-type inquiries were considered in discussing limitations.

This research project was designed to apply and build upon existing theoretical constructs related to technology use among a small, purposive sample of participants and to examine those constructs in relation to perceptions of the strength of the working alliance with their therapist. Because it was not the intent of this study to generalize findings to a larger population, external validity was not a primary aim. Future research may expand and
test the theoretical constructs resulting from this study in larger populations. Additionally, member checking, although not planned within the time and confidentiality constraints of the study, may have been useful for refining and assuring the accuracy of constructs and the theoretical explanations chosen for semi-structured interview data.

A limitation specific to quantitative strategies is instrument validity. As mentioned in the previous chapters, the alliance construct has been defined and measured from the perspective of professionally derived definitions and perspectives (Henkelman & Paulson, 2006). As Hentchel (2007) reminds us, relying solely on one definition of alliance dramatically confines perspectives on this enormously complex construct. As such, one limitation of this study is its reliance on the WAI-S as the primary alliance measure which, alone, examines alliance from a specific perspective, not inclusive of others that may exist professionally, or among the client participants in this study. Reinforcing this point and as previously reviewed, Bachelor’s (2013) exploratory factor analysis of three alliance instruments (WAI, CALPAS, and HAq) and client derived components of alliance, found generally poor correspondence between participant generated factors and the instrument a priori constructs. Therefore, this research examines alliance from the perspective delimited by the WAI-S.

In addition, while the content validity of the WAI-S has been found to be comparable to the longer WAI version (Busseri & Tyler, 2003), the discriminant validity of the WAI-S subscales, particularly task and goal scales, has been brought into question (Hatcher & Gilaspy, 2006). It cannot be overstated the importance in acknowledging this finding in the context of interpreting the study results. While associations between task subscale scores were evident in the bivariate statistical analysis, the goal subscale failed to
reflect more than a small association with any of the variables explored. Conversely, associations between task scores and several technology use variables were somewhat more robust. Why these findings differ from Hatcher and Gillaspy’s (2006) findings remains unclear. It may be due to the sample, or possibly the effect of an email-augmented treatment dynamic wherein the goal construct is less important than task and bond constructs. When interpreting these findings, we should acknowledge Hatcher and Gillaspy’s cautions, yet also regard these results as an intriguing rationale for future study.

As will be discussed in subsequent sections, the technology use variables were elicited and coded from content analysis of the interview narratives. As a result, there exists evidence of multi-collinearity between the technology use variables that emerged, reflecting the possibility that the constructs under measurement are not mutually exclusive. This phenomenon limits the ability to examine the variables for predictive power within a regression model and reinforces the importance of future research inquiry on technology use experiences using developed and well-validated instruments.

5.3 Results

5.3.1 Sample and Participant Profile

Statistical Analysis of the total sample revealed a broad dispersion in age with females outnumbering males. Most reported they were not currently in a relationship with a significant other as they had either been divorced or never married. The sample was relatively equal with respect to their insured status with half receiving Federal or state-funded health insurance (Medicare or Medicaid) and the remainder having commercial
health insurance. Very few were not insured. The sample was well educated with two-thirds reporting at least some college and fewer than 10% having not completed high school. They varied significantly with respect to distance lived from their therapist’s office with one-third living within ten miles, 20 miles and more than 21 miles away respectively.

Most of the sample had been treated in the past (before their current psychotherapy engagement) with nearly one-third reporting a history of psychiatric hospitalization and two-thirds reporting having been prescribed psychotropic medications in the past. They were well engaged in psychotherapy at the time of their participation with an even dispersion of total counseling sessions with providers ranging from at least 3 sessions to more than 10 sessions. Due to the nature of this study, these findings apply only to this sample of adult participants.

5.3.2 Technology Findings

Participants described frequent use of communication technologies with the majority indicating they typically used 4 mediums. They overwhelmingly expressed a preference for mobile texting and mobile calling as their primary technological methods for communicating with others. Email arose as a third preference for staying in touch while social media, primarily Facebook, was considered a strong fourth preference by many. Very few reported use of video technology for communicating with others, although one-third said they had tried it in the past. Participant preferences for mobile phone calling and asynchronous, text-based communication versus use of video communication represents an interesting finding and one that aligns with cues-filtered-in communication theories. Such a
framework is explanatory of user preferences for lower-cue versus higher-cue mediums within the technological arena.

Participants commonly discussed the convenience of email as a factor influencing which technologies they chose to use. Most had access to a computer or mobile smartphone such that email was accessible to them; however, texting was preferred for day-to-day communication because of its efficiency. Such a perspective is conveyed in the following excerpt from the interviews as one participant stated, “[Email] is just not convenient. It takes more time to use. I'm rarely at home. I'm usually on the move. Email doesn't fit into my life as well [as texting and cell phone for communication].” Nevertheless, many shared an appreciation for email, versus texting or calling, because of the added freedom it provided to clarify one’s thoughts before sending a message and the greater latitude to type unlimited characters such that email messages could be more clearly formulated. The convenience of email was often discussed in relation to between-session communication, or to cancel/reschedule appointments with ease. For example one participant shared, “It's sometimes hard to get my therapist on the phone. I know that they’re seeing somebody so calling them feels inconvenient, maybe disruptive. I know I’ll have to leave a phone message, so email gives me kind of quick way to do it without disturbing anyone.”

In their entirety, and as will be discussed in the sections that follow, the above findings align with the Technology Acceptance Model (TAM) and Ishii’s (2006) suggestion that both spatial and temporal mobility are influential characteristics in decision making relative to use of communication technology. However, as the efficiency framework posits, communication efficiency does not always equate to communication effectiveness (Nowak, Watt, & Walther, 2009). Many participants in this study acknowledged that email was less
efficient to use compared to mobile texting, yet appeared to carve out particular uses for email with their therapist and within that context, found its lack of convenience to be an acceptable compromise. This finding is important as it suggests that therapeutic interactions may be unique compared to other less formal interactions such as between friends/family and that the characteristics of email may be a good match for therapeutic dialogue.

The utility of email within psychotherapy represented another theme that was commonly discussed in the interviews. Utility reflected the degree to which email fit with the process of psychotherapy. Slightly less than one-fifth of the participants acknowledged that while they had the capacity to use email with their therapist, they choose not to because of concerns over the privacy of the medium, or perceptions that email communication was not necessary given that fTf therapy sessions were sufficient. Approximately the same number used it only for administrative tasks such as canceling, or rescheduling appointments. More commonly, email was discussed as a helpful way for the participants to keep their therapist informed of their experiences between sessions. Several indicated that this provided for more efficient fTf sessions as less time was spent reviewing the time period since the last appointment. For example, one participant shared, “Our emails are general check-in’s, like how I was doing following a weekend. Then we can cut to the chase in sessions.” Others expressed recognition that email helped them maintain their recovery momentum between appointments. Often this observance was described by those who used email more regularly for profound and personal communications with their therapist. As one participant described, “Therapy doesn't end just because you walk out the door. It gives [my therapist] something to think about and sometimes she'll respond back saying ‘What about this?’ or even just validating what I said. It pushes me to think at a deeper level.” As
discussed within the literature review, this finding coincides with assumptions about the effectiveness of email in therapy by Osterberg and Blaschke (2005), that treatment gains tended to last as long as the treatment.

Participants who expressed greater perceptions of email’s utility within psychotherapy used it as a tool to enhance their communication with their provider versus for purely administrative purposes. This finding aligns with Spitzberg’s (2006) CMC competency theory and its attention to the concept of motivation, which represents an energizing component affecting interaction intensity and engagement. Spitzberg’s framework suggests that while high motivation is represented by communicator involvement, low motivation is characterized by apprehension and shyness. As such, this framework seems to explain the findings which reflected utility as more strongly, albeit moderately, associated with alliance strength than the other technological variables examined. Therapist understandings of the importance of utility, and that people may tend to use email for different purposes, establishes the scaffolding for therapist-client collaborative discussion about how email might be used between sessions and the degree to which the client might consider this valuable.

Technological competency emerged as a third theme within the interviews. In describing one’s knowledge about, or comfort in, using technology, participants discussed their ability to use the technology. They also spoke of their literacy skills and abilities to express themselves fluently in writing. Not unexpectedly, based upon the demographic characteristics of the study participants with modest levels of education and use of a variety of communication mediums, most described their competency as adequate, if not advanced. Only a small number communicated significant challenges in operating technology or
difficulties writing lengthy emails. Relative to the latter, participant perceptions were less focused on their ability to read and write and more focused on concerns about the amount of time required of them to accurately reflect what they wanted to communicate within an email format. For example, one participant shared, “Sometimes I’ll spend an hour writing an email [to my therapist], rewriting it, changing this and that until I think it is perfect. It takes a long time.” The majority of participants discussed their competency in relation to both use of the technology equipment and their literacy skills. In other words, for most, both were important.

While a paucity of research exists relative to technological competency and alliance, Spitzberg’s (2006) CMC competency theory suggests that CMC knowledge is inversely related to CMC anxiety and positively related to CMC efficacy, from which we might deduce, could affect relationship factors and the strength of the working alliance. A client’s perception of lacking CMC knowledge could signify such tension and therefore, should be explored at the outset before email is used, and monitored on an ongoing basis. On a practical level, therapist understandings of the potential for angst among clients in the process of creating emails, helps to inform therapist-client dialogue at the outset of email use to allay client fears that their emails need to reflect literary excellence. Instead, therapists are encouraged to establish realistic and informal expectations in their clients about the length, content and quality of emails.

The connection continuum reflected participant perceptions of the impact of email communication on their relationship with their therapist ranging from disconnecting to enhancing of their relationship. Two general viewpoints emerged within the interviews. One-third of the participants described email and communication technology in general, as
less personal than fTf or telephone engagement. Slightly more than half of the participants described feeling comfortable with distance-communication sharing that it helped them to express themselves more accurately and safely. First-generation cues-filtered-out CMC theories such as social presence theory, support perspectives of communication via technology as lacking compared to fTf interactions. Within these frameworks, technological communication mediums exist along a continuum based upon the number communication cues ranging from more to less. Cue-rich media offers multiple cues (visual, auditory, etc.) such as televideo, while cue-deprived media offers substantially less, such as in asynchronous email or mobile texting. The cues-filtered-out perspective predicts that mediums offering more channels and symbols of communication lead to more relational involvement, warmth and complex communication between parties (Kehrwald, 2008). In contrast, cues-filtered-in perspectives such as hyperpersonal theory explain the observance that, at times, CMC interactions exceed those of fTf relative to their personal nature (Walther, 2011). In the absence of communication cues, interactants strive to make use of alternative cues to fill in the gaps such that while relationship formation may take longer, ultimately they are just as rich, if not richer than relationships formed using cue-loaded media. Milne (2010) articulates this point in describing text-based communication, “At times subjects believe the body imagined in these exchanges is more real, more expressive of the writer’s emotions and soul, and this belief may be threatened by the actual body encountered in fTf communication” (p.3).

Participants fell almost equally between cues-out and cues-in frameworks with a slight preference towards perspectives supporting the advantages of communicating by email. Half of the participants described email as either a bridge or connection with their
therapist between appointments, or as a tool that enhanced their therapeutic relationship beyond that which would have been otherwise possible fTf. One participant shared, “I like knowing that [my therapist] is always out there and that I can touch-base with her whenever I need to.” Another conveyed, “I feel like she is sitting in front of me when I write. Email helps me be more expressive.” Conversely, fewer than one-half of the participants identified email as disconnecting or limiting connections. For example, as one participant stated, “I feel strangely disconnected [using email]. It's just not the same as fTf [psychotherapy] for me.” While the latter narrative represents a perspective that email, as a low-cue medium, limits the capacity for successful communication, the former narrative reflects a cues-filtered-in perspective. Rather than experiencing email as disconnecting, this participant found it to be quite similar to fTf interaction (“she is sitting in front of me”) while the fewer cues made communication easier and more successful, especially in the context of emotionally intense periods of time.

While contemporary communication scholars have tended to side with cues-filtered-in models, Walther (2011) acknowledges that cues-filtered-out perspectives have not disappeared. That participants in this study espoused both cues-filtered-in and out frameworks would seem to support such a contention. On a practical level, therapists will benefit from awareness that individuals hold a wide-variety of perspectives about the degree to which communication technology connects versus disconnects interactants. Such awareness offers valuable information to guide therapist dialogue with clients about client perceptions of connectivity using email. Viewpoints that email communication is impersonal, or distancing, may contraindicate the use of email to augment psychotherapy, or
perhaps suggest that it might be helpful to use, but only for specific administrative purposes such as scheduling and rescheduling appointments.

Finally, trust in the privacy of communication technology was identified as a theme in just over half of the interviews. Two general perspectives emerged, those who worried about their on-line privacy such that they tended to use less technology as a result, and those who enjoyed the added benefit of anonymity, or distance, provided by communication technology. At slightly more than a two-to-one ratio, participants favored the privacy of technology such that they tended to use it more frequently. One example of this perspective was conveyed in the following interview excerpt, “when it comes to lots of staff working there [at my therapist’s office] it kind of makes me nervous leaving a [telephone] message on the voicemail machine. I would rather send it in an email.” Given the characteristics of the participants of this study and their use of a number of communication technology channels, it is not surprising that most acknowledged the benefits of distance communication vis-à-vis privacy such that they used it more frequently. Given the prior discussion of stigma and its potential impact on individuals with medically diagnosed bodies, future research might consider the degree to which such perceptions of privacy are associated with experiences stigma.

Within the literature, examination of trust and privacy of on-line communication has typically been conducted within the context of e-services such as internet and phone banking, and more generally, commercial applications of technology (Dimitriadis & Kyrezis, 2010). As such, exploration of trust and privacy has involved consideration of a multitude of factors (Dimitriadis & Kyrezis, 2010), which are not specifically relevant to this research. No literature was identified examining technology trust and privacy in
relation to alliance; as such, these results pose a novel perspective to the existent literature and a direction for further study.

Regardless of client perspectives on trust in the privacy of technological communication within the therapeutic relationship, therapists must stay apprised of the risks and benefits of online interaction and be prepared to discuss with each client how they protect the privacy of clients using current encryption standards and other safeguards before using email for between-session communication. Professional guidelines are emerging within the counseling professions such as the American Counseling Association, American Psychological Association and National Association of Social Workers, to help guide such discussions and to ensure that therapists who use technology to communicate with their clients are doing so consistent with parameters established by the Health Insurance Portability and Accountability Act (HIPPA).

5.3.3 Implications for Practice

The semi-structured interviews offer a unique perspective on the type and use of communication technology among individuals receiving psychotherapy for the treatment of medically diagnosed conditions. As such, they present practicing providers with rich information and a beginning structure for considering when, how and with whom to use email, and more generally, communication technology, to improve client engagement and treatment outcomes.

Although each participant was currently using email to augment his/her psychotherapy, the interview narratives reflect a broad dispersion of perspectives and experiences among participants across each of the themes relative to their technology use.
Beyond opinions, there was also significant variation in the amount of time participants reported communicating with their therapist online ranging from .10 to 5 hours per week. Such variation reinforces the importance for psychotherapists to carefully and individually consider with each client when, how and with whom to use technology versus relying on a standard practice policy or simple decision matrices. While one individual may find email highly useful to therapy, another may find it ineffective, or even unsafe from the perspective of privacy. Considering each client’s perspective of the degree to which they experience email communication as rich versus impoverished may offer important clues as to when and how to proceed with the use of email in psychotherapy.

Such an approach aligns closely with foundational principles of psychotherapy and the infrastructure necessary to potentiate a sound working alliance with each client. As Norcross (2011) reminds us, clients find therapy more helpful when therapists are perceptive to subtle indicators of relational stress and subsequently encourage clients to explore them. Because weakened alliances have been found to correlate with unilateral termination by the client (Horvath & Bedi, 2002), the importance of such awareness cannot be overstated.

Secondly, considering the degree to which email, or communication technology in general, might successfully augment psychotherapy and enhance treatment outcomes, further reinforces the principle that psychotherapy should be personalized to the uniqueness of the client and his/her context (Norcross, 2011). Collaborative dialogue with clients about their technology use experiences, their perspectives on how technology affects their relationships, and how well they perceive themselves to communicate using technology is consistent with this process, and those espoused within the alliance literature. Such
discourse reflects efforts to achieve client and therapist agreement on the goals of therapy and the tasks required to achieve those goals, including the conditions for engaging one another as part of the working relationship (Norcross, 2011). Understanding and considering these elements within psychotherapy may lead to more fruitful use of email, and technology in general, with clients.

Therapist inquiries of clients to explore whether to use email or not, might include questions about whether they have an email account and would they accept and reply to a periodic email from their provider. The above findings provide an opportunity to engage clients at a much deeper and more varied level about their communication technology use and experiences, which collectively offers a far more granular perspective that certainly informs collaborative email-augmented practice. For example, convenience could be explored with the client by inquiring about the availability of a computer and their perception that they can readily integrate email communication into their busy daily routine. Exploration of the utility of email to psychotherapy should consider how one might use email between sessions. Would the client be apt to use it as a bridge between appointments, to share personal disclosures, or would email represent one more option for use just in case an emergency arouse? Exploring one’s comfort in using email technology and communicating in writing is also important. Despite a client’ perception of technological competency, the findings herein highlight the importance for psychotherapists to establish with clients realistic expectations about how much to write within their emails to allay fears about spelling errors, sentence structures and any expectations that email psychotherapy must reflect literary excellence versus more practical, relevant communication between sessions. Additional areas to consider include the degree to which the client experiences
communication via technological mediums to be interpersonally rich versus bland, and whether they perceive distance communication to enhance versus threaten their privacy. In their entirety, exploration of these variables will add an important dimension to the therapeutic dialogue while concurrently strengthening the collaborative stance of the provider and ideally, the working relationship.

5.3.4 The Working Alliance in Email-Augmented Psychotherapy

This dissertation supports preliminary findings within the literature that the alliance, so important to engagement and outcome in fTf psychotherapy, is associated with email-augmented therapy. The alliance scores among the total sample revealed a mean score of 6.35. Of the three subscales (task, goal and bond), the highest scores were within the bond subscale followed by task and goal respectively. The standard deviations of alliance scores ranged from .686 to .540. Scholars such as MacDuffie (2010) and Busseri and Tyler (2003), reported analogous findings with respect to bond scores reflecting the highest alliance scores followed by the total alliance scores, and similar score dispersions with a range of 0.62-0.80 and 0.62-0.99 respectively. In their studies, however, task subscale scores were the lowest. Visually, the alliance and alliance subscale scores reflected platykurtic (negatively skewed) distributions with a high degree of peakedness towards higher (more favorable) alliance scores. One exception to the above patterns was within total alliance scores, which reflected a negative skew, but slightly more evenly distributed range of scores. Variances among the subscales and total alliance scales revealed equality of variances. Therefore, the bond subscale scores had greater variation from the mean than did the scores for total alliance, task and goal scales.
5.3.5 Pearson Product-Moment Correlations

The interview narratives conveyed technology use preferences in accordance with a number of existing theories within the CMC literature. In an effort to examine the relationships between technology use and alliance, a Pearson product-moment correlation matrix was computed for alliance, technology use, and relevant demographic and clinical variables. Interestingly, despite the evidence within the interview narratives of strong perceptions among many participants about their experiences in using email with their therapist, in general, technology use variables did not substantially correlate with the working alliance.

The association between participant perceptions of the convenience of email and total alliance, task and bond subscale scores was small ($r = .109$, .079 and .18 respectively) suggesting that perceived convenience has only a minimal association with the working alliance. Such findings contradict tenets of the efficiency framework which recognizes that computer-mediated interaction takes more time and attention than face-to-face (fTf) interactions, but the heightened effort on the part of senders and receivers can often result in fewer misunderstandings and greater communicative satisfaction (Nowak et al., 2009). Nevertheless, they expose for future research questions about the degree to which efficiency and ease of technology use contribute to the formation and maintenance of sound relationships within psychotherapy.

The association between participant perceptions of email’s utility and alliance ratings reflected the greatest associations, albeit moderate, compared to the other technology
use variables explored. As such, it appears that perceptions of email’s utility are important factors to consider when deciding whether to use email to augment traditional fTf psychotherapy. The associations were moderate and positive between utility and total alliance (r = .278), task (r = .311), and bond (r = .324) scores, and negligible between utility and goal scores (r = .069).

Turning to communications scholarship, the utility-bond correlations align with Spitzberg’s (2006) motivation construct described within CMC competence theory. Within this framework, the concept of motivation goes beyond approach motives to reflect communicator involvement, confidence and engagement while negative motivation is characterized by constructs of shyness, apprehension and anxiety (Spitzberg, 2006). Therefore, higher motivation would lead to more involved email interactions. The moderate correlations do indicate that participants who espoused the utility of email, also tended to perceive a somewhat stronger alliance and particularly a bond with their psychotherapist, lending support for the value in psychotherapist and client consideration of utility as they explore whether or not to utilize email to augment fTf services. Why the goal scores reflected a smaller association with utility remains unclear, especially given that, within fTf psychotherapy, the discriminant validity of the WAI-S subscales, particularly task and goal scales, has been brought into question by Hatcher & Gilaspy (2006) who suggested that WAI-S raters may not adequately differentiate between the two constructs. It seems antithetical, given that email, as a written record, would leave less room for ambiguity within the goal-setting context.

The email alliance literature reviewed previously does not reflect a divergence of goal subscale scores from the other subscales or total alliance within email and fTf therapy
participants (e.g. Cook & Doyle, 2002; D'Arcy, Reynolds, Stiles, & Grohol, 2006; Prado & Meyer, 2006), although Cook and Doyle (2002) found that individuals participating in chat or email therapy had lower task scores than the fTf therapy cohort. Other scholars have recognized that the alliance effect and function can be quite diverse across media types such that close examination of the process, and mediating variables is essential (Sucala et al., 2012). As such, these findings add to an existing gap in the current research, but more investigation is needed. It must be remembered that approaching the measurement of alliance from the perspective of one professionally derived definition and instrument is inherently limiting. As such, research examining alliance from multiple professional and client-generated perspectives is suggested.

Nevertheless, these results offer a novel glimpse into the potential relationship between perceptions of email utility and alliance strength in individual psychotherapy. Furthermore, they challenge one of the primary criticisms of email use in therapy; namely, that it is challenging, if not impossible, to establish a strong therapeutic alliance given the dearth of nonverbal cues within the email medium (Cook & Doyle, 2002; Skarderud, 2003). Additionally and as previously discussed, these associations offer a focus for client-therapist dialogue in the process of considering the use and impact of email to augment traditional psychotherapy services, which is consistent with the value of collaboration espoused within the alliance literature (Norcross, 2011).

The association between competency and alliance strength was negligible for both task \( (r = .031) \) and goal \( (r = .055) \) scores and only slightly stronger and positive between competency and bond scores \( (r = .208) \). The association between total alliance scores, which comprise scores from all three subscales, reflected only a small, positive association \( (r = \)
.122). Task and goal subscales of the WAI were less associated with technology competency than the perceived strength of the affective connection between interactants, although the association between all was minimal. Competency was strongly correlated with perceptions of the utility of email, which would indicate that one’s comfort with email coincides with their perceptions of its usefulness in therapy.

The literature review does not provide relevant material from the alliance research to inform these results because, as previously mentioned, technology use variables have not been studied in relation to the therapeutic alliance. The lack of moderate to strong correlations conflicts with Spitzberg’s (2006) CMC competency theory. This framework suggests a convergence between knowledge and motivation proposing instead that CMC knowledge is inversely related to CMC anxiety and positively related to CMC efficacy (Spitzberg, 2006). As a result, one’s perception that technology is difficult to operate, might logically contribute to the degree of anxiety and hesitation in using any technology, not the least of which with their psychotherapist. That Spitzberg’s CMC competency model examines a number of variables beyond knowledge might explain why the associations are no larger than moderate within this study. In other words, additional variables may also be influential.

The association between connection and alliance was small and positive ($r = .084$), including within bond ($r = .107$) and task ($r = .143$) subscales. The association between connection and the goal subscale was negligible.

Collectively, these results suggest that client perceptions of the degree to which email disconnects versus connects is minimally associated with alliance strength. This
finding may suggest that the working alliance is predominantly developed and maintained within the fTf therapy sessions and not influenced by between-session email.

Conversely, we could examine the results based upon what is not evident versus what is evident within them. The results do not strongly support, nor completely refute, perspectives espoused within the CMC literature which, as previously discussed, offers a range of communication theories that seek to explain the process of computer-mediated relationship formation. For example, from the perspectives of social information processing theory and hyperpersonal theory of CMC—both cues-filtered-in perspectives—positive associations between alliance ratings and technology use variables would be expected. From the perspective of cues-filtered-out models like social presence theory, we would expect inverse associations. Moreover, as Liebert, Archer, Munson, & York (2006) noted in their exploratory study, the single largest comment among participants was the absence of body language and physical contact within online counseling. From this perspective, the effectiveness of email communication would be considered limiting.

Again, on a practical level, these results preliminarily highlight the importance for therapists to precisely define and discuss the purpose of using email in therapy to ensure the client’s agreement that email be used. For example, a client’s perspective that email communication is distancing and impersonal may be a potential contraindication to email use as an augment to fTf sessions.

The trust in privacy variable reflected the degree to which participants’ level of trust in the privacy of email communication influenced their intention to use technology for communication with others. Correlations between trust in privacy and alliance did not produce significant findings. This finding contradicts the technology acceptance literature
which posits that beliefs lead to attitudes, which in turn influence behavioral intentions and eventually behaviors relative to the use of technology (Dimitriadis & Kyrezis, 2010). Further investigation is warranted.

It is interesting that a greater degree of concern for the privacy of technology existed among those who tended to rate the alliance as stronger. It is also curious that while the task subscale scores were inversely associated with trust in privacy, bond scores were positively associated. It is possible that despite concerns among participants about technological privacy, their trust with the psychotherapist established within fTf sessions, regardless of privacy concerns in relation to email specifically, carried the most influence on perceptions of the affective bond. Another explanation for the inverse association between task and trust variables could be because those who experience more unease with the privacy of technology may also be the ones who used email for administrative tasks versus more profound and personal disclosures. While this is conjecture at this point, it is an interesting hypothesis that warrants future investigation. Another explanation for the incongruence could be because only 56% (N=23) of those interviewed spoke about their concerns relative to trust in privacy. The minimal number of responses could lead to a higher likelihood of uninterpretable associations.

The demographic and clinical variables, for the most part, reflected minimal associations with alliance and technology use variables with several exceptions. Moderate associations emerged between participant age and a number of alliance and technology use variables suggesting that age may be an important intervening variable within this study. Age was moderately, positively correlated with total alliance scores ($r = .161$) and to a
slightly stronger degree, with bond scores ($r = .198$). Task and goal subscales had only small associations with age ($r = .090$ and .076 respectively).

Younger participants tended to use more technologies for communication ($r = -.188$), expressed higher perceptions of email utility in psychotherapy ($r = -.235$), competency in using technology in general ($r = -.333$), perceptions of the impact of technology on their connection with the psychotherapist ($r = -.358$), and higher levels of trust in the privacy of technology ($r = -.481$). No relationship between age and convenience was discernable. These results suggest that younger participants tended to perceive greater utility of email in therapy, although they were no more likely to rate email as less convenient compared to other technological communication options compared to older participants.

The literature offers some support for these findings with younger people tending to be more frequent users of texting than calling, or f2f communication (Forgays, Hyman, & Schreiber, 2014; Hill, Burge, Haring, & Young, 2012; Pinchot, Paulet, Rota, & Morris, 2011). The association between trust in privacy and age reflected a moderate, inverse association suggesting that older participants tended to identify their trust in the privacy of technology as a factor which inhibited their use while younger participants tended to identify trust in privacy as a factor that increased their use of technology. Younger people were more apt to appreciate the privacy advantages of distanced, text-based interactions than those who were older.

Hours per week of participant computer-mediated communication with their therapist showed some promising moderate, positive associations with bond alliance scores, utility, competence and connection. These associations may indicate that the acceptance and efficacious use of technology may be a function of the intensity of the therapeutic
relationship rather than a direct perception of technology itself. As previously discussed, comments among participants within the interviews were consistent with such a claim. For example, many commented about their relationship with their therapist and concurrently described their use of email to maintain contact with them between sessions. In these excerpts, participants who described their use of email with their therapist beyond administrative functions conveyed a strong desire to keep their therapist apprised of week-to-week happenings and a propensity for profound, purposeful self-disclosures within the email modality. These findings indicate a need for further exploration. Interestingly, the association between total weekly hours of computer use and weekly hours spent communicating with the therapist online was negligible.

The distance participants lived from their therapist’s office was not substantially correlated with alliance. The highest of the correlations were evident between distance and bond scores ($r = .14$). The further one lived from their therapist’s office, the fewer communication technologies they reported using ($r = -.334$) and the lower their perceived convenience ($r = -.208$) and utility of email ($r = -.113$) compared to other technological mediums. The association between distance and technological competence was not discernable.

In their entirety, these findings might seem perplexing given the potential advantages technology offers to those living in rural areas to remain in contact with their providers (Muresan, Montgomery, & David, 2012; Marks et al., 2003). One possible explanation for these findings might be due to the rural geography of the study setting. As one resides further from the urban area, where most of the therapists who participated in the study worked, they may have had less internet connectivity resulting in fewer communication
technological choices for use. Another possible explanation for these findings may be due to age given the small, inverse relationship between age and distance lived from therapist’s office. Because this area was not specifically explored, a more precise explanation is not possible.

History of treatment had a moderate, inverse association with alliance ($r = -0.233$). The greatest association emerged between treatment history and bond ($r = -0.346$) followed by task ($r = -0.118$), and goal ($r = 0.073$) scores respectively. Within this sample, participants who experienced greater varieties of prior treatment and at more acute levels of care, tended to rate their perceptions of alliance as higher than participants with less, or no prior treatment. A small positive association emerged between those with less treatment experience and the number of technologies used ($r = 0.123$). In addition, those with less treatment experience tended to rate the connection with their therapist as more robust.

History of treatment was minimally associated with perceptions of email convenience ($r = 0.061$), utility ($r = 0.065$) and inversely associated with perceived technological competence ($r = -0.034$) and trust in privacy ($r = -0.08$).

Because we know very little about how people, including those with mental impairment utilize personal computers and email-capable devices, and how they feel in doing so (Donner, Gitau, & Marsden, 2011), these associations between treatment history and technology use variables, while small, inform an existent gap in the literature. The alliance literature provides some indirect support for these findings, particularly those that are moderate. A consistent finding in the psychotherapy literature is that clients’ current and past informal relationships are predictive of the quality of the therapeutic relationship (Meier, Donmall, Barowclough, McElduff, & Heller, 2005). From this perspective, these
findings might reflect that those who have had more, rather than less, treatment are also better accustomed to the therapy relationship and more at ease with close emotional relationships with professional providers (Eames & Roth, 2000) such that relationship development was enhanced.
CHAPTER 6
CONCLUSIONS

This study joins the communication and alliance literature to investigate the type and use of technology and its association with sound alliance development in a sample of adults participating in email-augmented psychotherapy. As such, it applies and builds on theoretical constructs related to technology use among those with medically diagnosed bodies and provides an empirical basis to inform providers’ contemporary practice harnessing technology to improve treatment access and efficacy. The results of this study preliminarily indicate that the working alliance is minimally or not at all associated with technology use variables derived from the communication literature. Because of the paucity of contemporary literature linking technology use variables with those on alliance, this research makes an important contribution to this knowledge gap by offering findings which provide several potential starting points for future study. As was discussed in the literature review, while CMC theories provide valuable context about the factors that affect technology use in therapy, they are limited given their focus entirely on the capacity of the technology to transmit communicative cues and essentialist assumptions that the communicators within an interaction are standard in their behavior. This study, through its exploration of the type and use of technology among adult psychotherapy recipients, offers a wealth of practical information to help providers initiate a systematic interview protocol with clients during the process of selecting which communication technology mediums might be most beneficial to use to enhance treatment outcomes. Such information can be
readily integrated within psychotherapy practice so as to be consistent with well-established principles of collaboration, goal consensus, respect and the importance of adapting treatment to the client’s characteristics, personality and worldview (Norcross & Lambert, 2011).

Indeed, technology usage is increasing at a dramatic pace within America and the global community (PEW Research Internet Project, 2014; Bradley, Hendricks, Lock, Whiting, & Parr, 2011). As a result, it is imperative for psychotherapy providers to closely evaluate the utility of technologies for use in their practices, or they may find themselves left behind in a healthcare system evolving rapidly towards full digitalization (Palaez, 2014) and increasing cost controls (Wickramasinghe, Arias, & Gonzalez, 2014). While this dissertation research offers crucial information that can be applied to inform psychotherapy practice, it is only the beginning of a larger research agenda. As is evident herein, acceptance of communication technology use within psychotherapy is varied among participants to the extent that technology use with all individuals without consideration of their personal experiences and beliefs is insufficient. Therefore, future research is needed to clearly delimit which technology use factors are predictive of sound alliance development. In addition, there exists a critical need for rigorous evaluation instruments to guide therapists in how best to use technology in their practices with the greatest effect.
REFERENCES


124


Sims, C. (2013). Is it time to rethink ‘digital inequality’(again)?. *Selected Papers of Internet Research, 3*.


APPENDICES
Counselor ID# __________ Client Case# __________ Date __________

Measurement Point (circle one): 1st Week 3rd Week

Instructions:

On the following page there are sentences that describe some of the different ways you might think or feel about your client. As you read the sentences mentally insert the name of your client in place of _____ in the text.

Below each statement there is a seven point scale:

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If the statement describes the way you always feel (or think) circle the number 7; if it never applies to you, circle the number 1. Use the numbers in between to describe the variations between these extremes.

Work quickly, your first impressions are the ones we would like to see.

PLEASE DON'T FORGET TO RESPOND TO EVERY ITEM.

Thank You!

1. ______ and I agree about the things I will need to do in counseling to help improve my situation.

2. What I am doing in counseling gives me new ways of looking at my problem.

3. I believe ______ likes me.

4. ______ does not understand what I am trying to accomplish in counseling.
5. I am confident in ________'s ability to help me.

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6. ________ and I are working towards mutually agreed upon goals.

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7. I feel that ________ appreciates me.

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8. We agree on what is important for me to work on.

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9. ________ and I trust one another.

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10. ________ and I have different ideas on what my problems are.

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11. We have established a good understanding of the kind of changes that would be good for me.

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12. I believe the way we are working with my problem is correct.

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Appendix B

DEMOGRAPHIC SURVEY

Participant Survey

The Type and Experience of Technology Use on Alliance Development in Email-Augmented Psychotherapy

This survey is part of a research study designed to help us learn more about how individuals participating in email-augmented psychotherapy use technology in general, and how email-augmented psychotherapy influences the client’s perception of the relationship with their treatment provider. Please answer each question to the best of your ability. This is a confidential survey. You do not need to write your name on this survey.

Should you need assistance in completing the survey, please contact the Principle Investigator, Brent Scobie at (207) 944-6077 or by email at brent.scobie@umit.maine.edu.

1. What is your current age? ______

2. What is your gender?
   □ Male
   □ Female

3. Please indicate your current relationship status:
   □ Never married
   □ Currently partnered, not married
   □ Currently married
   □ Married but separated
   □ Divorced
   □ Widowed

4. In which town do you currently live? __________________________

5. Please indicate which type of health insurance you use, if any:
   □ Private insurance (Anthem, Aetna, Cigna, etc.)
   □ Mainecare
   □ Medicare
   □ Other (please specify) __________________________
   □ I do not have health insurance
6. About how many miles must you travel from your home to your psychotherapist’s office?
- □ Less than 10 miles
- □ 11-20 miles
- □ 21-30 miles
- □ More than 30 miles

7. As of today, about how many TFt psychotherapy sessions have you had with your current (or recent) psychotherapist?
- □ 1-2 sessions
- □ 3-6 sessions
- □ 7-10 sessions
- □ More than 10 sessions

8. Please indicate your highest level of education completed?
- □ Some high school
- □ High school diploma/GED
- □ Some college
- □ College graduate
- □ Advanced degree

9. Prior to your current psychotherapist, have you received mental health treatment in the past? (check all that apply)
- □ No, I have not had any previous treatment
- □ Yes, I have received inpatient psychiatric treatment in the past
- □ Yes, I have received outpatient counseling or group treatment in the past
- □ Yes, I have been prescribed medication for emotional symptoms in the past
10. Are you currently required to receive psychotherapy treatment for legal or other purposes?

☐ No
☐ Yes (please specify by whom) ________________________________

11. In the past three months, about how many appointments with your psychotherapist have you missed for any reason?

☐ I have not missed any appointments
☐ 1-2
☐ 3-4
☐ More than 4

12. What is the background of your current psychotherapist?

☐ Licensed Clinical Social Worker (LCSW)
☐ Licensed Clinical Professional Counselor (LCPC)
☐ Clinical Psychologist (PhD)
☐ Licensed Marital and Family Therapist (LMFT)
☐ Other (please specify) ________________________________
☐ I do not know

13. When you miss psychotherapy appointments with your provider, how would you best describe the reason? (select the most likely)

☐ Forgetfulness
☐ Work
☐ Family priorities
☐ Lack of transportation
☐ I do not feel well enough
☐ Other (please specify) ________________________________

14. About how often do you communicate with your psychotherapist using email?

☐ Daily
☐ Weekly
☐ Monthly
☐ As needed but usually less than monthly
15. On a typical week, how many hours do you use a computer to communicate with your psychotherapist? __________.

16. On a typical week, how many hours do you use a computer for any purpose? __________

17. Would you be willing to participate in a brief telephone interview and to receive $20.00 in compensation? YES _____ NO ________

IF YES, please provide a contact telephone number where you may be reached

____________________
Appendix C

PSYCHOTHERAPIST RECRUITMENT FORM

PSYCHOTHERAPIST PARTICIPATION FORM

Email-Augmented Psychotherapy and Alliance Study
Brent Scobie, MSW, LCSW, CCS
6 State Street, Suite 517
Bangor, ME 04401
207-944-6077
Brent.scobie@umit.maine.edu

Dear Psychotherapist:

You are receiving this letter because you have indicated a willingness to assist in the recruitment of participants for an important research study to examine technology use and perceptions of the Working Alliance among your current psychotherapy clients with whom you have exchanged electronic emails for communication or treatment purposes in conjunction with F2F therapy sessions. Because email is utilized for multiple purposes (reminders, scheduling, therapy), there are no requirements that your email communication with clients be specific to the delivery of formal therapy services.

The value of this research is significant. It fills gaps within the alliance research by examining the alliance construct within a hybrid treatment model in which electronic email is used in conjunction with F2F (F2F) psychotherapy. Additionally, it increases our understanding about how individuals utilize and experience technology within the therapeutic context which further informs decision making about how to best fit treatment approaches to client preferences to enhance their response to treatment.

Clients who wish to participate in the study will be asked to take part in two data-collection activities: 1) Completion of two questionnaires, a demographic and informational survey (16-questions) and a second questionnaire titled the Working Alliance Inventory—Short Form (12-questions); and 2) Participation in a brief telephone interview to provide additional information about their technology use and experiences using mobile telephones, computers and electronic email. In its entirety, participation will take approximately 30 minutes of their time.

As compensation for time and effort, participants who complete both activities above will receive a pre-paid Visa Card in the amount of $20.00. Compensation will be mailed directly to their home address. Participants may skip any questions that they do not wish to answer. The decision to not answer certain questions will not influence their compensation. Each participant is free to participate in all, or part, of the study and to withdraw their participation at any time during the project; however, compensation for time and effort requires completion of both the questionnaires and telephone interview with the exception of questions that they do not wish to answer.
As a Maine psychotherapist, your role in this research project is important. Very few Maine psychotherapists utilize email to augment their fTf treatment such that recruitment of study participants can be quite difficult. As part of your participation you are asked to notify clients to whom you currently provide psychotherapy as described above, who you also believe meet the inclusion and exclusion criteria defined in the sections below. Should a client express an interest in participating, please read them enclosed “Recruitment Script” and provide them with a copy of the Informed Consent letter enclosed here. Using my contact information on the top of the consent, your clients can contact me directly via email or telephone to indicate willingness to participate or to ask additional questions about the research study.

The inclusion and exclusion criteria for study participants are delineated below. Please provide information on this research study to clients who, based on your current knowledge, fit within these criteria.

**Inclusion Criteria:** 1) Capable of understanding and autonomously providing written consent to participate in the research project; 2) 18 years of age or older; 3) Currently participating in psychotherapy in which email is used to augment fTf session; 4) Able to speak, read and write English.

**Exclusion Criteria:** 1) Unwilling or unable to consent to study participation; 2) Currently experiences any condition that is determined to prevent the individual from clearly, willingly or knowingly consenting to participate in the research study; 3) Prior participation in email-only psychotherapy; 4) Has attended fewer than 3 psychotherapy session with current provider.

You are not asked to share any protected information about your clients. At no time of the study will your client be asked to identify you as their psychotherapy provider. All information that is collected from participants will remain confidential. All files that contain identifying information will be stored within an encrypted file system and available only to the Principle Investigator. All data from this study will be analyzed together. No personal information relative to participants or their therapy providers will be contained within any resulting publications or presentations.

Consistent with the standards of research with human subjects, the following protocols will be followed to ensure prompt destruction of data collected within this project:

- All client emails and email addresses will be deleted immediately following the receipt of their completed surveys.
- All audio recordings of client interviews will be destroyed once each interview is transcribed and reviewed for accuracy.
- All hard copy surveys submitted by participants will be destroyed once the data is entered into the electronic database and reviewed for accuracy.
- The key linking the data to participant names will be destroyed at the conclusion of the data analysis phase of the study, which is anticipated to be on, or around, February 28, 2014.
• All de-identified data will be destroyed on or before December 31, 2016.

Except for your time and inconvenience, there are no risks to you from participating in the participant recruitment phase of this study. If you have any questions about this study please contact Brent Scobie at (207)944-6077 or Liz DePoy, Doctoral Committee Chairperson and Research Advisor at 581-1469. Study results will be available upon request by September 2014.

Should you have any questions about this research project, please call or email me directly. Thank you in advance for your willingness to participate!

Sincerely,

Brent Scobie
Brent.scobie@umit.maine.edu
(207) 944-6077
Appendix D

CONSENT TO PARTICIPATE FORM

Email-Augmented Psychotherapy and Alliance Study
Brent Scobie, MSW, LCSW, CCS
6 State Street, Suite 517
Bangor, ME 04401
207-944-6077
Brent.scobie@umit.maine.edu

You are invited to take part in a research project. The project is being led by Brent Scobie. He is a graduate student in the Department of Disabilities Studies at the University of Maine. Liz DePoy, PhD is the faculty sponsor of this research. The purpose of the research is to understand more the use of email and fTf communication in therapy. A second purpose is to learn how email and fTf therapy impact how you feel about your therapist.

What Will You Be Asked to Do

If you agree, you will be asked to complete two surveys. There are a total of 38 questions. The questions will ask you to share information about yourself. This information includes your age, gender and marital status. You will be about your current treatment with your therapist. How long have you received treatment? Do you ever miss appointments? If so, why? Also, you will be asked to share how you feel about your therapist. Do you both agree on your goals for treatment? Do you feel that your therapist can help you? Do you feel the way you and your therapist are working on your goals is right? The surveys can be emailed to you. You can complete them electronically. We can also mail them to you through the postal service. If you wish for surveys to be mailed to you, we will include a stamped envelope so you can easily return completed surveys. You will also be asked to take part in a brief telephone interview. The interview will be recorded. You will be asked to talk about your technology use and experiences. In total, your participation will take approximately 30 minutes.

Risks

Except for your time, there are no risks to you from taking part in this study.

Benefits

This research may help therapists learn about how clients use and experience technology in treatment. This information may help therapists discuss when and if to use email with their clients. It may offer new ideas about how email affects the client’s experience with their therapist. A strong connection between client and provider improves treatment outcomes. As
a result, this research may help to inform good treatment practice. It may also benefit you. You may gain new insights about your use of email with your therapist and how it influences your relationship with them.

Compensation

Once you complete the surveys and the interview, you will receive a $20.00 pre-paid Visa Card. This will be mailed to your home address. You may skip any questions that you do not wish to answer. This will not influence your payment for participation.

Confidentiality

Your name will not be on any of the data used in this study. A code number will be used to protect your privacy. The investigator will be the only person with access to the data collected. All data will be kept in the investigator’s locked office on a password protected, encrypted computer file. Encryption is the process of changing an electronic file into something that is unreadable to anyone other than the research investigator. Your name and personal information will not be reported in any publications. The key linking your ID code to the data will be destroyed after data analysis is completed. The data analysis is planned to be completed by February 28, 2014.

If you send an email to Mr. Scobie, your emails and email address will be deleted following the receipt of your completed surveys. All interview recordings will be destroyed once each interview is transcribed and checked for accuracy. All paper surveys will be destroyed once the data are entered into the database and checked. All de-identified data will be destroyed on or before December 31, 2016.

Voluntary

Your decision to participate in this study is voluntary. You are free to take part in all, or part, of the study. You may withdraw your participation at any time during the duration of the project. Payment for your time requires completion of both the surveys and telephone interview. If you choose not to answer specific questions, you will still receive reimbursement for your participation.

Contact Information

If you have any questions about this study, please contact Brent Scobie at (207) 944-6077. You may also contact Liz DePoy, Committee Chairperson and Research Advisor. Her phone number is 581-1469. If you have questions about your rights as a research participant, please contact Gayle Jones. Ms. Jones is the Assistant to the University of Maine’s Protection of Human Subjects Review Board. Her phone number is 581-1498. Her email address is gayle.jones@umit.maine.edu.
If you would like to take part in this study, please call or email Brent Scobie. His contact information at the top of this letter. Your consent to participate in this study will be implied by your completion of the surveys and interview.

Sincerely,

Brent Scobie
Appendix E

PSYCHOTHERAPIST PARTICIPANT RECRUITMENT SCRIPT

Psychotherapist Participant Recruitment Script to be read by psychotherapists to their clientele whom, based on their current knowledge about them, meet the inclusion and exclusion criteria for the study.

Psychotherapist Reads the Following:

I am notifying my psychotherapy clients about an important research study being conducted by a doctoral student at the University of Maine named Brent Scobie. He is seeking interested adults (18 years old or older) who are currently receiving individual psychotherapy services and who also use email for communication with their provider for support, scheduling appointments, reminders, etc.

The purpose of the study is twofold: 1) to understand the type of technology use among adults who participate in psychotherapy in which email communication is used along with fToT treatment sessions; and 2) to understand how email, in addition to fToT psychotherapy, influences client perceptions of the relationship with their treatment provider.

I wanted you to be aware of this opportunity because I think that you meet the requirements for participation and thought you might have an interest in enrolling.

If you decided to participate, you would be asked to complete two questionnaires which could either be emailed or sent directly to you by Mr. Scobie. One of the questionnaires is a demographic survey (16-questions) which will ask about your age, gender, marital status and some questions about your current treatment, how many sessions you have attended, how far away from my office you live, etc. The second questionnaire consists of 12-questions and is designed to measure how you feel about our working relationship. The questions ask you how closely you feel we agree on the problem areas that you identify, how closely we agree on common goals for your treatment, etc.

In addition to these surveys, you would also be asked to participate in a short telephone interview with Mr. Scobie in which you would be asked to talk about your technology use and experiences in general. In total the questionnaires and interview will talk approximately 30 minutes of your time.

Your decision to participate is completely voluntary and confidential. Your name will not be on any of the documents used in the study, nor will I have access to any information you provide to Mr. Scobie. Your decision to participate or not will not influence your current treatment with me in any way.

If you choose to participate in some or all of the study you would be compensated $20.00 for your time which would be sent to you as a pre-paid Visa Card. While you would be asked to
take part in both the surveys and interview, you would not need to answer questions if you did not wish to answer them.

If you think that you might be interested in participating in this research study I can give you a research consent form that has the contact information for Mr. Scobie. He has asked that you contact him directly to enroll or if you have any questions about the research project.
Appendix F

LIMITED COPYRIGHT RELEASE FOR THE WAI-S

Mr. Brent Scobie
University of Maine
Disability Studies
64 Town Farm Rd
Hampden ME
04444
United States

Dear Mr. Scobie

You have permission to use the Working Alliance Inventory (WAI) for the investigation:

"The Nature and Experience of Technology Use on Alliance Development In Email-Augmented Psychotherapy"

This limited copyright release extends to all forms of the WAI for which I hold copyright privileges, but limited to use of the inventory for not-for-profit research, and does not include the right to publish or distribute the instrument(s) in any form.

I would appreciate if you shared the results of your research with me when your work is completed so I may share this information with other researchers who might wish to use the WAI. If I can be of further help, do not hesitate to contact me.

Dr. Adam O. Horvath
Professor
Faculty of Education and
Department of Psychology

e-mail: horvath@sfu.ca
Internet: http://wai.profhorvath.com

August 7, 2014
Appendix G

WAI CODING SHEET

Task scale items: 1, 2, 8, 12.
Direction of scoring: + + + +

Bond scale items: 3, 5, 7, 9.
Direction of scoring: + + + +

Goal scale items: 4, 6, 10, 11.
Direction of scoring: - + - +

High values are positive (+); low values are negative (-), reverse scoring
BIOGRAPHY OF THE AUTHOR

Brent Scobie was born on February 20, 1969 in Ann Arbor, Michigan. He spent his early years living in St. Paul Minnesota and later, Hanover, New Hampshire where he graduated from High School. He attended one year of college at Eckerd College in St. Petersburg, Florida and then transferred to the University of Maine in Orono where he completed a Bachelor of Arts degree in English in 1992. Following his graduation, he accepted a position developing alumni activities for a not-for-profit organization in Indianapolis, Indiana before returning to academia and the University of Maine in 1995. He completed a Masters in Social Work in 1997. Since that time he has worked for Acadia Hospital in varying capacities as a clinical social worker and executive administrator within both mental health and substance abuse treatment programs. In addition, he has maintained a small psychotherapy practice in Bangor, Maine since 2002.

After receiving his degree, Brent will continue to work for Acadia Hospital. He is a candidate for the Doctor of Philosophy degree Interdisciplinary in Disability Studies and Social Work from the University of Maine in May 2015.