TELEPSYCHOLOGY AND THE THERAPEUTIC ALLIANCE: UNDERSTANDING THE DEVELOPMENT OF THE THERAPEUTIC ALLIANCE IN VIDEOCONFERENCING PSYCHOTHERAPY

by

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(Under the Direction of Bernadette D. Heckman)

ABSTRACT

With the increased use of telepsychology since the onset of COVID-19, there is an increased need to better understand the process of psychotherapy delivered remotely. The Contextual Model is a model of the common factors and aims to describe the mechanisms of change in psychotherapy. Included in this model is the therapeutic alliance, which is the most widely researched common factor and is found to be consistently related to the process and outcome of therapy. However, much of the existing literature on alliance in telepsychology is examined through randomized controlled trails, which may have limitations when generalized to community-based mental health or low-income individuals. The current study is a naturalistic study that aims to fill the gap in the literature by examining the development of the therapeutic alliance between in-person and videoconferencing psychotherapy during the early phase of therapy for trainee therapists and for patients. This research also sought to study the relationship between therapeutic alliance and outcome. Finally, the study explored the relationship between therapeutic alliance and telehealth usability. A total of twenty-four

patient and trainee therapist dyads were enrolled in the study. Data revealed that trainee therapists did not report a significant difference in alliance between in-person and videoconferencing during the early phase of a new therapeutic relationship. Patients reported significantly higher alliance scores for in-person therapy compared to telepsychology at session three but there was not a difference between groups at the first and fifth session. Second, data did not support a significant relationship between alliance and outcome for patients. Finally, there was not a significant relationship between therapeutic alliance and telehealth usability for patients or for trainee therapists. Results of this study should be interpreted with extreme caution due to the small sample size, though they may provide considerations for future research with this population. Clinical applications and future research may focus on the significance of the third session for the therapeutic alliance in a new therapeutic relationship as well as the feasibility and preferences of telehealth and in-person therapy sessions with this population. Limitations, clinical applications, and future directions are discussed.

INDEX WORDS: Therapeutic alliance, Telepsychology, Videoconferencing, Telehealth usability

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CHAPTER 1

INTRODUCTION

Statement of the Problem

Telehealth originated in the 1960s for education and teleconsultation purposes (Cooper et al., 2019; Darkins & Cary, 2000). Psychologists were instrumental in the proliferation and development of synchronous telepsychology programs, and mental health treatment has been a top telehealth specialty for decades (Cooper et al., 2019). In 2020, the use of telehealth grew exponentially due to the coronavirus pandemic and social distancing mandates. Over 85% of clinical services provided by psychologists were via telehealth during the pandemic, and this trend is anticipated to continue growing (Pierce et al., 2021). In fact, within 6 months from the start of the pandemic, 96% of American Psychological Association (APA) members who were surveyed reported seeing clients over telehealth (Schriger et al., 2022). Currently, the state of emergency resulting from COVID-19 has been lifted and clinicians and patients are no longer restricted by social distancing and public health mandates. Nevertheless, since the lifting of the restrictions that initially shifted services from in-person to virtual, telepsychology services continue to be a preferred delivery method for therapy. Therefore, with an increased, and likely permanent, prevalence in the use of telecommunication technology, there is an increased need to better understand the processes of clinical services delivered remotely.

The mechanism of change in therapy can be viewed through specific and nonspecific factors. For instance, in cognitive therapy, the theory posits that change occurs through a specific factor that is changing maladaptive patterns of beliefs. Additionally, there are common or

nonspecific factors that contribute to change. Examples of common factors can be grouped into categories that encompass support, learning, and action (Cuijpers et al., 2019). The Contextual Model is a theoretical model derived from the common factors that aims to describe the mechanisms of change in psychotherapy (Wampold & Imel, 2015). Of all the common factors, the therapeutic alliance it is the most widely researched (Cuijpers et al., 2019; Wampold & Imel, 2015) and is defined as the bond between the patient and therapist, the agreement on the tasks of therapy, and the agreement on the goals of therapy (Bordin, 1979). In fact, decades of research support that 30% of outcome is based on common factors and that the therapeutic relationship is consistently more highly correlated with client outcome than with specialized techniques (Cuijpers et al., 2019; Lambert & Barley, 2002). Furthermore, Baldwin and colleagues (2007) found that therapists who formed strong bonds with their patients showed statistically significant better outcomes than those who did not. As such, patients' progress and outcome in treatment is impacted substantially based on the development of the therapeutic alliance (Lin, Anderson, et al., 2022).

The importance of the therapeutic alliance is particularly relevant in the early phase of therapy. What constitutes the "early phase" has been arbitrarily defined in the literature; however, researchers suggest that this phase can be conceptualized by the range of the first five to seven sessions of therapy (Ardito & Rabellino, 2011; Flückiger et al., 2018; Lin, Anderson, et al., 2022). Within this time frame, early symptoms and early alliance are reciprocally related (e.g., higher alliance/lower symptoms) and predictive of positive outcome and dropout rate (Flückiger et al., 2020; Lin, Anderson, et al., 2022).

Existing literature regarding the impact of delivery format (in-person or telehealth) on alliance has been heterogeneous: some studies have found that the alliance in telehealth is better

compared to alliance in in-person psychotherapy, whereas other studies have found it to be equivalent or worse (Seuling et al., 2023). Additionally, research evidence supports that the perception of the therapeutic alliance in teletherapy may be incongruent between therapist and patient, such that there are differences in how highly a patient rates the alliance compared to how highly the therapist rates it (Cook & Doyle, 2002). This is further complicated when the therapist is a trainee (Lin, Stone, Heckman, et al., 2021). Based on existing literature about the therapeutic alliance being influential for process and outcome factors and based on the incongruences of alliance in telehealth, examining the development of the therapeutic relationship in the early sessions of psychotherapy from both the patient's and therapist's perspective is clinically meaningful.

While literature continues to explore the nuances of telehealth and the development of the therapeutic alliance, there is markedly less research dedicated to naturalistic studies pertaining to telehealth for low-income individuals (Cook & Doyle, 2002; Lin, Heckman, et al., 2022; Reis et al., 2021; Schriger et al., 2022). Digital disparities are prevalent in low-income populations, ranging from inaccessibility of devices and infrastructure, to differences in engagement in therapy, to interrupted connections. These disruptions are not only not a potential hindrance to progress in therapy, but also they may make it more difficult to develop a strong therapeutic alliance (Schriger et al., 2022). Therefore, additional research is needed to examine telehealth modalities with low-income individuals who are seeking mental health services at community-based clinics.

This study will add to the telepsychology and therapeutic alliance literature by increasing the breadth of naturalistic studies with a sample of trainee therapist and patient dyads who are beginning a therapeutic relationship. Additionally, this study will explore if telehealth usability

variables (e.g., usefulness, ease of use, effectiveness, reliability, and satisfaction) may be related to the development of the therapeutic alliance. This is particularly important for counseling psychology and related fields because "efforts to promulgate best practices and evidence-based treatments without including the relationship and responsiveness are seriously incomplete and potentially misleading" (Norcross & Lambert, 2018, p. 308). Ultimately, therapists can use this information to inform assessments and interventions to improve the trajectory of treatment and to guide clinical decisions.

Purpose of the Study

This study is naturalistic study that aims to understand how therapeutic alliance develops in in-person vs telepsychology relationships and whether the strength of the alliance (bond, tasks, goals) differs across these two different modes of therapy. The current study proposed to examine perceptions of alliance development among trainee therapists and among the patients in the study. There are three main aims that this study addresses:

Research Question 1: Does therapeutic alliance develop in the same way between in-person psychotherapy and synchronous, videoconferencing psychotherapy?

Hypothesis 1: Trainee therapists will report higher alliance scores (WAI bond, task, goal, composite) for in-person therapy compared to their alliance scores for videoconferencing psychotherapy.

Hypothesis 2: Patients will report higher alliance scores (WAI bond, task, goal, composite) for in-person therapy compared to their alliance scores for videoconferencing psychotherapy.

Research Question 2: Is there a relationship between higher patient-rated alliance and symptom reduction during the early phase of therapy (sessions 1-5) for both in-person and synchronous videoconferencing groups?

Hypothesis 1: Higher alliance scores reported by patients in videoconferencing telepsychology will be correlated with greater symptom reduction (symptom distress, interpersonal relations, and social role) in the early phase of therapy, which will be assessed at sessions 1 and 5.

Hypothesis 2: Higher alliance scores reported by patients in in-person therapy will be correlated with greater symptom reduction (symptom distress, interpersonal relations, and social role) in the early phase of therapy, which will be assessed at sessions 1 and 5.

Research Question 3: Are therapeutic alliance scores impacted by attributes of using a telehealth system?

Exploratory Hypothesis 1: Patient ratings on the Telehealth Usability Questionnaire (TUQ) will be positively correlated with their ratings on measures of working alliance (WAI-SR) such that higher usability ratings will be correlated with higher alliance ratings and vice versa.

Exploratory Hypothesis 2: Trainee therapist ratings on the Telehealth Usability Questionnaire (TUQ) will be positively correlated with their ratings on measures of working alliance (WAI-SR-Therapist) such that higher usability ratings will be correlated with higher alliance ratings and vice versa.

CHAPTER 2

LITERATURE REVIEW

Telepsychology

Operational Definition

Telepsychology has been defined as "the provision of psychological services using telecommunication technologies" (Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013, p. 791). This definition encompasses various platforms (e.g., phone, email, videoconferencing, and social media) and processes of preparing, transmitting, or communicating through varied electronic means (Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013). The use of telepsychology is relevant for both in-person and remote service delivery, as it can operate as a stand-alone treatment modality or as an adjunct to in-person therapy. "In-person" refers to the patient and clinician sharing the same physical space, whereas "remote" refers to the patient and the clinician being in different physical spaces. Psychological services could be delivered synchronously, with both people participating at the same time, or asynchronously, with them engaging in the service at different times. As an illustration, a clinician may use remote telepsychology services to augment in-person sessions by emailing homework to the patient that will be completed between sessions (asynchronously). This study will exclusively explore the therapeutic relationship between in-person psychotherapy and telepsychology via videoconferencing. Therefore, the present literature review will focus on these two modalities, though it is important to note that in the literature, the terms of telepsychology are heterogenous. Whereas the language in this literature

review will aim to maintain continuity with these operational definitions, care will be taken to maintain the integrity of the definitions and terms used by scholars in the reviewed research.

History of Telepsychology

Telehealth, as it is understood today, originated in the 1960s in the United States as a means for education and teleconsultation between Nebraska Psychiatric Institute and remote state mental health hospitals via a closed-circuit television (Darkins & Cary, 2000). However, telehealth was not immediately successful, and it was not until the 1990s that telemedicine became prominent in health care. The United States became pioneers for telemedicine in 1995, and the refocused attention on telehealth was sparked in order to provide care when there were no other options available (Darkins & Cary, 2000). In 1996, mental health was the top specialty for teleconsultation (21%; Darkins & Cary, 2000). Presently, the use of asynchronous telepractice in psychology is far greater than the use of synchronous practice (Cooper et al., 2019). Cooper and colleagues (2019) note that psychologists are credited with the development of "some of the earliest synchronous telepsychology programs in clinically supervised environments" (p. 1094).

Nevertheless, there are barriers to using telepsychology for both patients and therapists. Pierce and colleagues (2021) cite therapists' intrinsic factors such as doubts with ease and usefulness, lack of the provider's self-efficacy, and insufficient training opportunities. They also cite environmental barriers such as HIPAA, reimbursement, and state laws and regulations. There may be various factors that contribute to hesitancy on behalf of both patient and therapist, such as systemic, technological, and administrative concerns (Shreck et al., 2020). Patients' willingness and ability to use telepsychology is also a reflection of one's culture, location and infrastructure, digital literacy, and readiness (Reis et al., 2021). They may be motivated to use

telehealth as a way to reduce stigma and increase anonymity, to work with clinicians who are not local and have specialized training, and to participate in sessions in the convenience and ease of one's home (Shreck et al., 2020).

Prior to the pandemic, psychologists performed only about 7.07% of clinical work through telepsychology (Pierce et al., 2021). Many of the systemic and administrative barriers to practicing via telehealth were mitigated with the rapid shift to telehealth for public safety with the COVID-19 pandemic. For instance, Medicare relaxed reimbursement restrictions, HIPAA regulations were relaxed, state regulations were eased for interstate practice, and there were additional trainings and training programs for telehealth practice (Pierce et al., 2021). Since the COVID-19 pandemic, there has been a 26-fold increase in services provided through telecommunication technology by outpatient psychologists (a sevenfold increase in VAs; Pierce et al., 2021). With these barriers mitigated, the amount of clinical services provided via telepsychology during the pandemic rose to 85.53% (Pierce et al., 2021), and within six months of the onset of the pandemic, an American Psychological Association (APA) survey found that 96% of clinicians were seeing clients via telehealth (Schriger et al., 2022). Moving forward, an estimated 89.19% of psychologists anticipate continuing to use telepsychology for over a third of their clinical work after the pandemic (Pierce et al., 2021). With an increased prevalence in the use of telecommunication technology, there is an increased need to understand nuances of clinical services performed remotely.

Theoretical Framework

For the present study, the Contextual Model (Wampold & Imel, 2015) will be used to center the therapeutic alliance as an essential factor that guides the process and outcome of psychotherapy.

Common Factors

In the seminal article on common factors, Rosenzweig (1936) argued that therapy is successful regardless of treatment modality. In fact, he asserted that there are "*unrecognized factors*" in therapy that may be more important than the factors that the therapist is intentionally implementing (Rosenzweig, 1936, p. 412). Rosenzweig's nod to the Dodo bird ("Everybody has won, and all must have prizes") – insinuating that all therapies have similar and comparable effects – challenges the unique curative factor of an individual theoretical orientation over another (Cuijpers et al., 2019). Rosenzweig (1936) cites three considerations:

> (1) the operation of implicitly, unverbalized factors, such as catharsis, and the as yet undefined effect of the personality of the good therapist (2) the formal consistency of the therapeutic ideology as a basis for reintegration (3) the alternative formulation of psychological events and the interdependence of personality organization as concepts which reduce the effectual importance of mooted differences between one form of psychotherapy and another. (p. 415)

At the time of his publication, Rosenzweig's bold claim was not supported by research. However, for nearly the last century, there have been empirically based evolutions of the common factors model. An early, influential model was proposed by Jerome Frank in 1961. The focus of Frank's model is four nonspecific ingredients: the relationship between the patient and the helping person, the relationship as a healing setting, the plausible rationale for the patient's symptoms, and the procedures that align with the rationale being provided in a structured manner (Cuijpers et al., 2019; Wampold & Imel, 2015). At present, decades of research support the common factors approach. It is estimated that 30% of outcome is based on common factors, 15% is based on specific effects, 40% to extratherapy factors (e.g., spontaneous remission, social

support, fortuitous events), and 15% to the placebo effect (Cuijpers et al., 2019; Lambert & Barley, 2002). Examples of common factors according to the Contextual Model include goal consensus/collaboration, empathy, alliance, positive regard/affirmation, therapists (naturalistic), congruence/genuineness, therapists (RCTs), cultural adaptation of EBT, and expectations (Wampold, 2015).

Therapeutic Alliance

The therapeutic alliance, or therapeutic relationship, is considered the most important common factor (Cuijpers et al., 2019), and it is consistently more highly correlated with client outcome than is specialized techniques (Lambert & Barley, 2002). The alliance, a pantheoretical framework, has been operationally defined as the bond between the patient and therapist, the agreement on tasks of therapy, and the agreement on goals of therapy (Bordin, 1979). It is worth clarifying that the alliance is not synonymous with the overall therapeutic relationship; rather, the alliance reflects the process of therapy and what can be achieved based on how the elements of the relationship are functioning (Horvath et al., 2011). Furthermore, the alliance is suggested to influence outcome, not because of the healing effects of the alliance in and of itself, but because it functions as an ingredient allowing the patient to "accept, follow, and believe in the treatment" (Ardito & Rabellino, 2011, p. 2).

The Contextual Model

The "best developed and most modern" model for common factors is the Contextual Model (Cuijpers et al., 2019, p. 209). The Contextual Model, originally proposed in 2001, is rooted in the common factors approach and contrasts with the medical model, which reflects the idea that therapies work via specific ingredients because they target amelioration of specific

deficits. The Contextual Model is derived from Jerome Frank's work, which Wampold and Imel (2015) classify as the "most comprehensive model of common factors" (pp. 47–48).

The Contextual Model posits as its basic premise that the "benefits of psychotherapy accrue through social processes and that the relationship, broadly defined, is the bedrock of psychotherapy effectiveness" (Wampold & Imel, 2015, p. 50). This is a tripartite model that operates through three pathways after an initial bond (Wampold & Imel, 2015). According to this model, this prerequisite initial bond follows the work of Bordin (1979) who insisted on the importance of deep trust and attachment.

The first pathway in the Contextual Model, the Real Relationship, reflects the intimate, genuine, emotional experience that occurs between the patient and the therapist. It encompasses empathy and authenticity. On one hand, this relationship is unlike a typical social relationship because of the confidentiality and stability of the relationship in the face of difficult material. On the other hand, the relationship follows typical socialization norms of a relationship. This pathway is hypothesized to impact general well-being rather than symptom reduction (Wampold & Imel, 2015).

The second pathway is Expectations. Patients enter therapy with culturally situated beliefs and explanations for their distress that are often inhibitive of overcoming the source of distress. Therapy offers an adaptive explanation that encourages a way to overcome the distress. The importance in fostering expectations is that the explanation is accepted by the patient and that the actions toward reduced distress are consistent with that explanation. Therefore, a strong alliance reflects the patient's acceptance of the therapist's explanation of distress and that they are working toward the goals and tasks of therapy (Wampold, 2015). This pathway is related to quality of life and symptom reduction (Wampold & Imel, 2015).

The third and final pathway of the Contextual Model is Specific Ingredients (Wampold & Imel, 2015). The specific ingredients encourage the patient to engage in something that is health-promoting, whether by increasing a healthy target or decreasing an unhealthy target. Though the specific action to create change may be influenced by a specific therapy, "it is not assumed that these specific ingredients exert a direct effect through the medical model by repairing an apparent deficit, but rather that, in general, they stimulate healthy actions that are beneficial to patients" (Cuijpers et al., 2019, p. 210). Therefore, the alliance is critical in this pathway because the mutual agreement and work towards goals encourages the patient to engage in these behaviors (Wampold, 2015). Essentially, therapy aims to increase psychological well-being and reduce distressing symptoms, though the specific orientation or intervention may achieve this goal through different mechanisms. Additionally, positive change often generalizes across domains (e.g., behavior change, cognitions, interpersonal relationships). Ultimately, this model suggests that the strength of this relationship is related to the process and outcome of therapy, regardless of theoretical orientation.

Embedded within the Contextual Model is the therapeutic alliance. Wampold (2015) states that "a strong alliance is necessary for the third pathway as well as the second, as without a strong collaborative work, particularly agreement about the tasks of therapy, the patient will not likely enact healthy actions" (p. 272).

Outcome Research

Therapeutic Alliance

Research evidence suggests that there is a relationship between therapeutic alliance and outcome (Baldwin et al., 2007; Flückiger et al., 2018; Lambert & Barley, 2002; Wampold, 2015). While the operationalization of "outcomes" is varied among studies and is dependent on

the specific aim of the study, it generally relates to symptom reduction. Specifically, Lambert and Barley's chapter (2002) provides "examples of typical conclusions concerning the relationship between the therapeutic alliance and client outcome" such as symptomatic improvement, distorted cognitions, and depressive symptoms (p. 25). There have been five meta-analyses that have examined and supported the positive relationship between alliance and outcome (Flückiger et al., 2018; Horvath et al., 2011; Horvath & Bedi, 2002; Horvath & Symonds, 1991; Martin et al., 2000). Horvath and colleagues' (2011) meta-analysis examined the relationship between alliance and outcome in psychotherapy and found an effect size of r =0.275 which is statistically significant at $p < 0.0001$ level. This result is consistent with previous meta-analyses which found effect sizes ranging from r=0.21-0.26 (Horvath & Bedi, 2002; Horvath & Symonds, 1991; Martin et al., 2000). These results indicate a reliable relationship between alliance and outcome in therapy, accounting for 7.5% of variance in outcome (Horvath et al., 2011). Most recently, Flückiger and colleagues (2018) found an overall alliance-outcome association (r =.278), and this positive relationship held constant when controlling for moderators such as assessor, patient characteristics, treatment approaches, countries, and delivery modality (in person vs Internet). Despite some variability in the effect size among specific variables that they were examining, they concluded that this alliance-outcome relationship remained consistent. In fact, these researchers supported previous literature that, when followed longitudinally, there is an association between within-subject changes in alliance and changes in symptoms (Flückiger et al., 2018).

Further, Lambert and Barley (2002)'s study design included measures completed by a variety of client, therapist, and/or observer measures, and they use these varied examples to

conclude that the therapeutic relationship is consistently more highly correlated with client outcome than a particular therapy technique or orientation.

Telepsychology

Telepsychology has received generally favorable outcomes that are comparable to in-person services. For example, videoconferencing has demonstrated positive results compared to in-person therapy for symptom reduction of major depression, eating disorders, posttraumatic stress disorder, obsessive-compulsive disorder, panic disorder, and social anxiety disorder (Watts et al., 2020). Flückiger and colleagues (2018) conducted a meta-analysis of e-mental health or internet-based therapy studies that concluded quantitatively similar alliance-outcome relationships between in-person and internet-based therapies. Their results suggest that the alliance-outcome effect size (r=0.275) is similar to the effect size found in in-person therapy studies, contributing to 7.56% of the variance, and that the effect sizes within the telehealth studies are more homogenous than the larger sample.

Most recently, Lin, Heckman, and Anderson (2022) conducted a meta-analysis that found no significant differences between teletherapy and in-person therapy for treatment outcomes at posttreatment or follow-up, and there were no significant between group differences with attrition. Their meta-analysis included 17 studies with 18 comparisons for effect size, 18 studies with 19 comparisons for attrition rate, and 11 studies that included a follow-up at 3- and 6 months. Six of the studies compared in-person to telephone therapy, 13 studies compared in-person to videoconferencing, and one study compared telephone and videoconferencing to in-person therapy. There were a range of modalities (e.g., CBT, CPT, BA, exposure, and problem-solving therapy) for concerns such as PTSD, depression, GAD, gambling, and non-specific. They concluded that teletherapy is comparable to in-person at posttreatment and follow-up,

which is consistent with previous research. Notably, there was not an overall statistically significant difference in attrition between in-person therapy and teletherapy (videoconferencing and telephone), but there were higher attrition rates when only videoconferencing was compared to in-person therapy (Lin, Heckman, et al., 2022).

Mitchel and colleagues (2008) conducted a randomized controlled trial (RCT) that compared CBT for bulimia nervosa via telemedicine. They found that retention in treatment was comparable for both groups and that treatment differences (abstinence rates, eating disordered cognitions, and interview-assessed depression) favored the in-person group, but these differences were of marginal clinical significance. Therefore, they concluded that the telepsychology treatment is comparable to the in-person treatment.

Despite these promising results, Lin, Heckman, and Anderson (2022) caution that "it is premature to conclude that teletherapy is as efficacious as in-person therapy across all conditions, symptoms, and patient populations" (p. 9). Additionally, they suggest the importance of research conducted in naturalistic settings versus the emphasis on randomized controlled trials and the importance of additional attention to understand potential moderators of efficacy in therapy.

Process Research

Therapeutic Alliance

It is insufficient only to focus on outcome research without attending to the process of therapy, specifically to the development of the therapeutic alliance as it relates to telepsychology. Process research analyzes the "various aspects of the therapeutic process, which can also be measured during the course of therapy regardless of outcome" and "is what takes place between,

and within, the patient and therapist during the course of their interaction" (Ardito & Rabellino, 2011, p. 1).

"Early treatment phase" of psychotherapy has been arbitrarily defined, and there is not an agreed upon number of sessions; however, the consensus appears to be between 5-7 sessions. Research evidence has suggested that the development of the alliance is likely reflected in two phases (Ardito & Rabellino, 2011). Ardito and Rabellino (2011) summarize that the first phase of therapy and initial development of alliance includes the first five sessions, with peak alliance at session 3. They describe that this phase includes collaboration and confidence, agreement on goals, and the development of the patient's confidence in the framework of therapy.

Lin, Anderson, and colleagues (2022) consider the first five sessions to be the "early developmental 'critical period' of treatment" (p. 4). Acknowledging the vagueness of the definition of "early psychotherapy," they operationalized early psychotherapy for their study as the first five sessions because it provides enough data points to examine the trajectory of the alliance. They included data from 272 patients and 85 doctoral therapists from an archival dataset at a training clinic. They found that symptom trajectories (high symptoms/steady change and early improving) and alliance patterns (undeveloped alliance, strengthening moderate alliance, optimal alliance, and improved alliance) could predict treatment outcome, both independently and interactively (Lin, Anderson, et al., 2022).

A strong therapeutic alliance is important for the continuity of treatment (Flückiger et al., 2020; Sharf et al., 2010). There is a "moderately strong relationship" between alliance and psychotherapy dropout in adult individual psychotherapy (d=.55), such that there is an increased risk of drop out if the patient-therapist dyad has a weaker alliance (Sharf et al., 2010, p. 637).

Research evidence supports that higher average alliance scores in the early phase of treatment have a significant positive association with posttreatment outcome, such that higher alliance/lower symptom ratings in early sessions predict this trend for future sessions (Flückiger et al., 2020). Flückiger and colleagues (2020) used data from sessions 1-7 for their 2-stage individual participant data meta-analysis. They justified this developmental period by balancing the statistical requirements of their data analysis and the appropriate number of sessions. They included 17 studies from 9 countries with varied clinical populations and treatment types, which they claim encompass diverse training and mental health contexts. Across the treatment methods and diagnoses, they found "significant reciprocal within-patient effects between alliance and symptoms within the first 7 sessions" (Flückiger et al., 2020, p. 830). In other words, the data suggests that the relationship of higher alliance/lower symptoms predicts future sessions with higher alliance/lower symptoms. To summarize, they describe that early alliance and symptoms should be considered variables that go "hand-in-hand" as opposed to a causal relationship (Flückiger et al., 2020, p. 838). Further, research has supported that "patients may benefit differently from the early therapy based on how their working alliance with the therapist develops over time" (Lin, Anderson, et al., 2022, p. 10). Beyond the early phase of treatment, alliance patterns appear to be variable and not a linear function of time; rather, the alliance throughout therapy often includes ruptures and repairs leading to additional complexity in understanding the development of the alliance (Ardito & Rabellino, 2011).

Further, an important consideration in understanding the therapeutic alliance is the variability within the patient-rated alliance score. Baldwin and colleagues (2007) studied the patient's alliance rating to examine the patient variability and the therapist variability separately. Their findings suggest that these two components of alliance are not equally predictive. Rather,

their research supports that the therapist variability is more predictive of outcome and that "therapists who, on average, formed stronger alliances with their patients showed statistically significant better outcomes" which supports the common factors theory (Baldwin et al., 2007, p. 849).

Therapists

The COVID-19 pandemic and rapid transition to telehealth illuminated the consideration of the clinician's experience. Lin, Heckman, and Anderson (2022) found that there were higher attrition rates for trainee therapists compared to licensed therapists when providing services via telehealth. These concerns are hypothesized to be explained by the trainees' overall lack of experience. Lin, Stone, and Anderson (2021) highlight that the trainees may not have the skills to make up for the lack of non-verbal cues with patients in virtual sessions possibly due to the disruptions in all aspects of training, which may have hindered their ability to receive the needed support, training, and supervision.

Lin, Stone, Heckman, and Anderson (2021) sampled 440 trainees and therapists to examine their perceptions about differences in therapeutic attributes between in-person and teletherapy. Overall, they found that therapists reported perceived deficits in common therapeutic skills, extra-therapeutic influences, and perceived outcomes in teletherapy compared to in-person. While the pervasiveness of therapists' difficulty across common skills in telehealth is noteworthy, it is especially concerning that their perceived working alliance scores were lower in telehealth, which suggests that "alliance may be more vulnerable in teletherapy than in-person therapy" (Lin, Stone, Heckman, et al., 2021, p. 456).

In a randomized controlled trial for an evidenced-based bulimia nervosa treatment by Ertelt and colleagues (2011), research supported that therapists differed between their

perceptions of telemedicine and in-person sessions. As mentioned previously, the results suggested that the treatment outcomes were similar when comparing the two modalities. However, when the researchers examined the ratings on therapeutic alliance, they found that the therapists rated the task, goal, and bond subscales of the WAI higher in the in-person treatment compared to the virtual treatment. On the subscales, therapists' ratings improved as treatment progressed on the bond and goal subscale (Ertelt et al., 2011). Notably, when this data was analyzed for outcome purposes, there were no clinically significant differences between in-person and telepsychology (Mitchell et al., 2008). This is consistent with overall findings that therapists perceive weaker alliance in telepsychology compared to in-person therapy (Lin, Stone, Heckman, et al., 2021; Seuling et al., 2023), despite seemingly similar outcomes (Flückiger et al., 2018; Lin, Heckman, et al., 2022). Taken together, this literature highlights the influence of the therapists' and trainees' perceptions and evaluations of the therapeutic alliance during teletherapy.

Patients

In Ertelt and colleagues' (2011) study comparing telepsychology and in-person treatment for bulimia nervosa, patients' ratings on the alliance subscales (goals, tasks, bond) did not differ significantly in their ratings between modalities, and their ratings improved as treatment progressed on all three subscales. Overall, the researchers concluded that patients' perception of the therapeutic alliance did not differ significantly between in-person and virtual treatment and therefore they may not have a strong preference for treatment modality.

Norwood and colleagues (2018) conducted a meta-analysis examining the alliance and outcome effectiveness in videoconferencing. They found surprising and seemingly contradicting results that have implications for seeking to understand process-related factors in

videoconferencing telepsychology. Their meta-analysis supported that there was an inferior working alliance in videoconferencing compared to in-person, yet there was noninferior symptom reduction between the groups. While these results seem contradictory based on common factors literature, they hypothesize that the inferiority of alliance in videoconferencing could be due to the reporter for alliance in the respective studies and/or due to their analysis combining the alliance data (client, therapist, observer), and this may veil the differences in ratings between patients and therapists. Nevertheless, they hypothesize that the working alliance is being rated lower because of discomfort with the treatment modality or because there is a unique factor occurring with videoconferencing that is not being measured by standard measurements such as the Working Alliance Inventory (WAI; Norwood et al., 2018).

In considering differences between telepsychology and in-person that may not be measured in current measures of alliances, Day and Schneider (2002) also found that there were process differences when examining a randomized five-session treatment comparing in-person, real-time videoconferencing, and audio (telephone), such that there was increased patient participation (e.g., activity level, initiative, trust, spontaneity, and disinhibition) in the videoconferencing and audio sessions, but there were no treatment differences. They speculate that this may be due to the patients needing to make more of an effort to communicate and take responsibility or that the distance increased feelings of safety to be open with the therapist.

Watts and colleagues (2020) assessed the working alliance in a randomized controlled trial of cognitive behavioral therapy (CBT) for generalized anxiety disorder (GAD) between videoconferencing and in-person therapy. Fifty participants were assigned to the videoconferencing group and 65 were assigned to the face-to-face group. Therapists (graduate interns in psychology) and participants completed WAI ratings every two sessions, up to session

15. Results provide evidence of the participants' alliance ratings surpassing the therapists' ratings. Watts and colleagues (2020) note that this is an important finding because that was not seen in the in-person control group. They hypothesize that the participants in the videoconferencing group felt more comfortable and, perhaps, that videoconferencing provided the patients with a greater sense of control. Notably, there were three participants who did not complete the study because they did not like videoconferencing (Watts et al., 2020).

Sueling and colleagues (2023) conducted a systemic review and meta-analysis of existing literature comparing in-person psychotherapy to videoconferencing psychotherapy to update and expand the previously discussed findings by Norwood and colleagues (2018). Whereas this analysis found that the ratings between alliance for in-person and telepsychology did not differ for clients or therapists, respectively, they offer an important caution that most of the videoconferencing interventions in the studies that were included in this analysis were delivered in a research building or clinic. In fact, this was the case for the aforementioned study by Watts and colleagues (2020), where the participants in this study attended their teletherapy sessions at the university clinic in a remote room designated for videoconferencing. Therefore, the researchers caution that there may be additional considerations or differences for patients who participate in videoconferencing from their homes or private locations compared to in a clinic or designated space identified by the research team (Seuling et al., 2023). While conducting interventions in a clinic may increase internal validity of the studies, it likely detracts from external generalizability and how telehealth operates in a naturalistic setting (Norwood et al., 2018; Seuling et al., 2023). For instance, the development of the alliance may be different if the patient is in their home and has safety, privacy, or connectivity concerns.

Ultimately, the literature on working alliance in telepsychology is limited, and it appears to be complex, especially when considering factors that operate differently between the patient and therapist.

Additional Considerations

Beyond controlling for presenting concern or diagnosis, there are population characteristics that are critical for understanding the development of the therapeutic alliance (Cook & Doyle, 2002). Often in clinical research, there is an overrepresentation of privileged populations and an underrepresentation of minoritized or disempowered populations. For example, in meta-analyses, there may be a neglect of intersectionality, or the findings may be interpreted "without a careful integration of the patients' overall psychosocial situation [which] may result in single-edged interpretations" (Flückiger et al., 2018, pp. 332–333).

From a global perspective, there is a disproportionate amount of research conducted on wealthier nations. From 2019 to 2020, there was a 280% increase in the number of studies about telehealth published on PubMed, yet only 2% of those studies in 2020 included low- and middle-income countries in their title or abstract (Reis et al., 2021). Consistently, people who have higher incomes are overrepresented in telehealth (Cook & Doyle, 2002). This highlights that telehealth, which is typically considered a method of reducing health disparities, can be contributing to "widening the gap between groups both nationally and even globally due to persistent social, economic, and political factors" (Ramsetty & Adams, 2020, p. 1147). As Reis and colleagues (2021) advise, "Telehealth policies should consider that socioeconomic abysses among regions and specific population groups restrict access to adequate devices and technology. In addition, patterns of technology usage are also influenced by culture and user location, beyond socioeconomic factors" (Reis et al., 2021, p. 1). Intersectionality contributes to

the widening of disparities because of institutional sexism, agism, and racism (Chunara et al., 2021). Within the United States, Chunara and colleagues (2021) found that health disparities during COVID-19 not only affected in-person health care access, but they permeated into telehealth access, particularly for older, Black patients and those who live in areas of lower income at an academic healthcare system in New York . Furthermore, in 2018 in the United States, the poverty rate was 13.4%, affecting people of color, women, and children disproportionally more than whites and males (Campbell & Selby-Nelson, 2020).

These findings are especially relevant as those who are typically served by community mental health settings are predominantly from low-income populations (Schriger et al., 2022). Therefore, mental health services are under-utilized and may not properly address the needs of the poor because of barriers to service delivery including client variables, therapist variables, and systems variables (Campbell & Selby-Nelson, 2020). For example, telehealth may be inaccessible to low-income clients due to digital disparities, lack of access to devices, and connectivity issues (Schriger et al., 2022).

Whether analyzed from a global or community level, there needs to be additional consideration of barriers related to telehealth implementation such as the infrastructure of the community, relationship between formal literacy and digital literacy, and readiness by patients and providers to implement new systems (Reis et al., 2021). There may be issues related to lack of internet, mistrust of the medical community or technology, lack of up-to-date information about technology, and inability to pay for devices/subscriptions (Ramsetty & Adams, 2020). Reliable access to internet is considered a "super-determinant" of health, and the 25% of US adults who do not have access to broadband internet are people who have lower income and

education and who are more likely to have additional marginalized identities (Schriger et al., 2022, para. 3).

Ultimately, this study aims to respond to Chunara and colleagues' (2021) recommendation to further understand the complex intersection of identities and variables that contribute to health disparities so that providers can better serve them. Patients in rural areas may not have readily accessible access to care (Mitchell et al., 2008); therefore, telepsychology is often touted to increase access for people living in rural areas. However, Pierce and colleagues (2021) caution that rural psychologists and patients may have limited access to technology or adequate wi-fi. Additionally, much of the published literature focuses on randomized controlled trials, which has limitations when applied to clinical settings (Lin, Heckman, et al., 2022; Schriger et al., 2022). As Flückiger and colleagues (2018) mention, our current knowledge of the alliance-outcome relationship in adult individual psychotherapy is likely a "birds-eye view" (p. 332) due to differences in operationalizations of what constitutes the alliance and how it is measured and analyzed. One such limitation of existing data is that the examination of clinician satisfaction and telehealth have typically been conducted in private settings, which may have limitations when generalized to community-based clinics given differences in resources, caseloads, and client complexity as compared to public settings (Schriger et al., 2022).

Finally, there is a "distinction between access to telehealth and engagement in telehealth; while session attendance is important, it is only half the battle" (Schriger et al., 2022, p. 9). There is likely already fear and anxiety related to the systems and power differentials in a therapeutic relationship, and the addition of technology may add increased worry and powerlessness. This study addresses how patients who are often underrepresented in the literature, namely those who

are low income and receiving free individual therapy services, experience telepsychology and the development of the therapeutic alliance.

CHAPTER 3

METHODOLOGY

This study was a naturalistic study that aimed to compare and understand the development of the therapeutic alliance between in-person and videoconferencing psychotherapy for trainee therapists and for patients. This study was approved by The University of Georgia Institutional Review Board (PROJECT00006408).

Research Questions and Hypotheses

Research Question 1: Does therapeutic alliance develop in the same way between in-person psychotherapy and synchronous, videoconferencing psychotherapy?

Hypothesis 1: Trainee therapists will report higher alliance scores (WAI bond, task, goal, composite) for in-person therapy compared to their alliance scores for videoconferencing psychotherapy

Hypothesis 2: Patients will report higher alliance scores (WAI bond, task, goal, composite) for in-person therapy compared to their alliance scores for videoconferencing psychotherapy.

Research Question 2***:*** Is there a relationship between higher patient-rated alliance and symptom reduction during the early phase of therapy (sessions 1-5) for both in-person and synchronous videoconferencing groups?

Hypothesis 1: Higher alliance scores reported by patients in videoconferencing telepsychology will be correlated with greater symptom reduction (symptom distress, interpersonal relations, and social role) in the early phase of therapy, which will be assessed at sessions 1 and 5.

Hypothesis 2: Higher alliance scores reported by patients in in-person therapy will be correlated with greater symptom reduction (symptom distress, interpersonal relations, and social role) in the early phase of therapy, which will be assessed at sessions 1 and 5.

Research Question 3: Are therapeutic alliance scores impacted by attributes of using a telehealth system?

Exploratory Hypothesis 1: Patient ratings on the Telehealth Usability Questionnaire (TUQ) will be positively correlated with their ratings on measures of working alliance (WAI-SR) such that higher usability ratings will be correlated with higher alliance ratings and vice versa.

Exploratory Hypothesis 2: Trainee therapist ratings on the Telehealth Usability Questionnaire (TUQ) will be positively correlated with their ratings on measures of working alliance (WAI-SR-Therapist) such that higher usability ratings will be correlated with higher alliance ratings and vice versa.

Participant Criteria and Recruitment

The primary researcher recruited 24 patient-trainee therapist dyads between June 2023 and February 2024 whose data was used in analysis. The trainee therapists were masters and doctoral-level clinicians (practicum, advanced practicum, interns, and post-doctoral residents) providing psychotherapy to patients from The Integrated Care Clinic (ICC), which are outpatient community mental health centers in Athens, GA, and from The Nia Project, an outpatient intervention program in Atlanta, GA. All trainees were under the supervision of licensed psychologists and starting a new therapy case.

The Integrated Care Clinic is an integrated care service that serves patients across three clinics: Athens Wellness Clinic, Specialty Care, and Live Forward. The patients represent

diverse community members who are economically disadvantaged and residing in and around the Athens, GA area. Athens Wellness Center provides free, comprehensive healthcare services to uninsured and low-to-no income individuals in Athens-Clarke County and surrounding communities. Specialty Care Clinic, part of the Northeast Health District of the Georgia Department of Public Health, offers free or low-cost comprehensive services to people living with HIV/AIDS regardless of whether they are insured. Live Forward, a non-profit organization that receives federal funding (Stewart B. McKinney Homeless Assistance Act of 1987 and Housing Opportunities for Persons with AIDS Program) serves the Northeast Health District of Georgia and provides residential, supportive, and outreach and prevention services to patients living with HIV/AIDS, focusing on healthy outcomes, housing stability, and independence. At each of these sites, trainee therapists from The University of Georgia's Masters in Mental Health Counseling and Counseling Psychology Doctoral Program provide individual free therapy services, either in-person or via videoconferencing, dependent on patient preference and clinical judgement. Of note, included in the consent for therapeutic services at ICC is that patients allow their clinical data to be deidentified and used for research purposes. For ICC patients, the researcher did not have access to private, identifiable information of the patients, they will not be re-contacted, and the data analysis was in aggregate form. Therefore, patients at ICC were not recruited as part of this study.

The Nia Project, located in Atlanta, Georgia, offers free therapeutic services, including weekly individual therapy. The Nia Project provides care to all demographics and genders, though they predominantly serve low-income, suicidal, Black women with a history of adverse childhood experiences and/or intimate partner violence. Trainee therapists who provide therapy at The Nia Project are master's students from the Atlanta Metropolitan area, advanced practicum

doctoral students, doctoral interns, and postdoctoral residents. Since the transition to telehealth with the COVID-19 pandemic, The Nia Project is continuing to serve its patients exclusively through telepsychology. Patients at Nia were eligible to participate if they were over the age of 18 and they were beginning a new therapeutic relationship with their trainee therapist who had consented to the study.

Trainee therapists at ICC and Nia Project were eligible to participate if they were master's or doctoral-level trainee therapists who were beginning a new therapy case (via videoconferencing or in-person). ICC therapists were eligible if they were administering and maintaining appropriate documentation of patient's assessments at the appropriate timepoints (after sessions 1, 3, and 5) according to ICC's Standard of Care. Trainee therapists at ICC were recruited via email Listserv, ICC clinician supervision/meetings, and word of mouth. Interested trainee therapists were referred to the researcher for informed consent.

Dyads at The Nia Project were recruited through the following process: Trainee therapist participants were recruited through information disseminated during a team meeting, email listserv, and word of mouth. Interested trainee therapists contacted the primary researcher to obtain informed consent. Then, when a trainee therapist accepted a new therapy patient, a designated Nia Project team member who was not providing services to patient participants informed the patient about the study. If interested, the patient provided verbal consent for the designated Nia Project Team Member to share contact information (name, email, phone number) with the primary researcher. The primary researcher contacted the interested patient and obtained informed consent.

Procedure

As part of the informed consent process, participants were informed of the nature of the study and the risks and benefits of their participation. All participants were informed of the voluntary nature of their involvement in the research project and that they can cease study participation at any time without penalty. ICC clinicians and Nia trainee therapists and patient participants were eligible to earn $10 Amazon e-gift card for each survey that they completed (up to $30 per case). Because data collection was part of ICC Standard of Care and all clinical information was deidentified, it was not possible to provide incentives to the patients who completed the ICC dyad.

After participants provided informed consent, the primary researcher sent an email to the participant that included their unique study ID, links to the electronic Qualtrics measures (based on videoconferencing or in-person modality), and a review of information about the responsibilities and incentives of the study. All participants were instructed to complete the measures during the early phase of psychotherapy (after therapy sessions 1, 3, and 5). The researcher sent text/email reminders to the participants throughout the study. Once study responsibilities were completed, the researcher confirmed the preferred email address for the incentive and sent the e-gift card that was earned based on the number of surveys completed. See Figure 1 for the ICC study procedure and Figure 2 for the Nia study procedure.

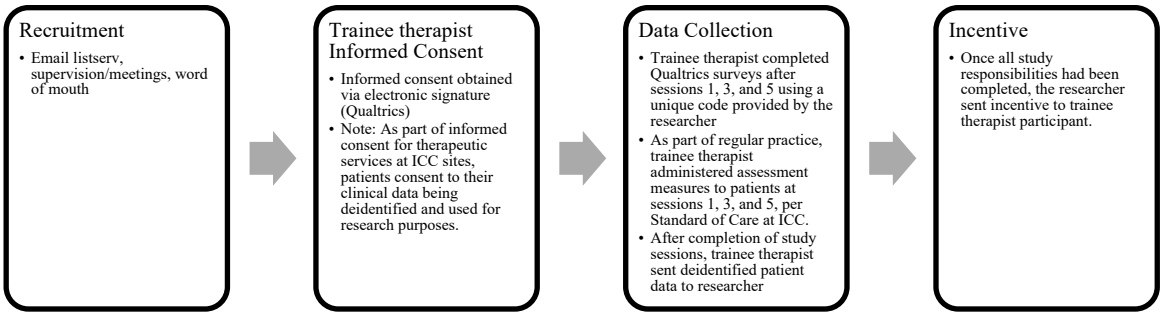

Figure 1

Study Procedure – Integrated Care Clinic

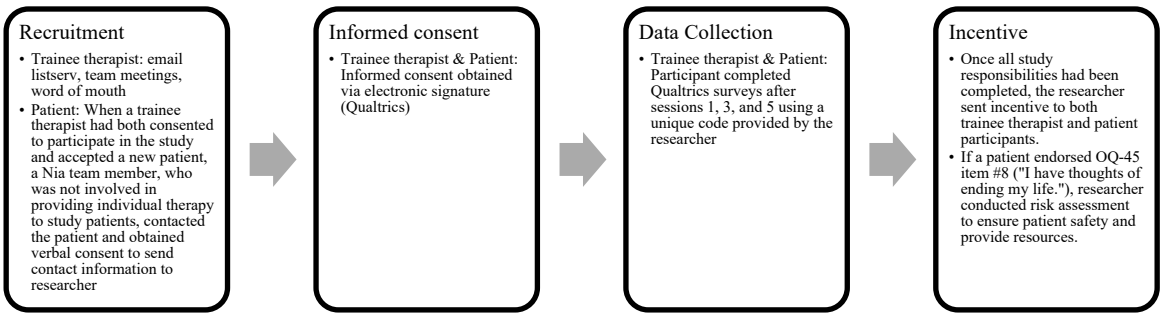

Figure 2

Study Procedure – The Nia Project

Measures

See Table 1 and Table 2 for data collection measures and timeline for patients and trainee therapists, respectively.

Demographic Questions

The demographic form obtained data about race/ethnicity, age, sex, gender identity, sexual orientation, marital status, and education. Patients were asked if they have previously engaged in therapy and length and modality of treatment, if applicable. At the conclusion of the study (after session 5), trainee therapists were asked about their theoretical orientation, provisional diagnosis for the patient, and if they have received specific telepsychology training prior to service delivery with this mode.

Working Alliance Inventory – Short Revised (WAI-SR)

The WAI is one of the most widely used scales for assessing the working alliance based on Bordin's (1979) theory (bond, tasks, goals). The WAI-SR is a "short version of the WAI that is consistent with its underlying theoretical base, has good measurement properties, and can be applied across diverse samples" (Hatcher & Gillaspy, 2006, p. 12). The original WAI had 36 items whereas the short, revised version has 12 items that are based on a 5-point Likert scale (1= "Seldom," 2= "Sometimes," 3= "Often," 4= "Fairly Often," 5="Always"). This measure has been supported to correlate with the WAI such that the WAI-SR can stand in for the full WAI (Hatcher & Gillaspy, 2006). In a confirmatory factor analysis in two samples, the WAI-SR has subscale alphas that range from .85 to .90 and total score alphas between .91-.92 (Hatcher & Gillaspy, 2006). Moreover, the WAI-SR is better able to differentiate between the Goal and Task subscales, which is an improvement because a critique of the WAI is that there are two factors rather than three (Falkenström et al., 2015; Hatcher & Gillaspy, 2006). Overall, the WAI-SR, developed by Hatcher and Gillaspy in 2006, has the best psychometric properties (Falkenström et al., 2015). In this study at session 5, the telehealth patient's total score for alliance was α =.95 and the in-person patients' total score for alliance was α = .98.

Working Alliance Inventory – Short Revised – Therapist Version (WAI-SR-T)

The WAI-SR (Hatcher & Gillaspy, 2006), has a therapist version that is widely used and was composed by mirroring the client version but rewording the items so that they are appropriate for therapists' rating (Hatcher et al., 2020; Holmqvist et al., 2016). A study by Holmqvist and colleagues (2016) revealed the following internal consistencies: for task, α = .91; for goal, α = .91; for bond α = .93; and for the whole scale α = .96. In this study at session 5, the

telehealth trainee therapists' total score for alliance was α =.89 and the in-person trainee therapists' total score for alliance was α =.92.

Outcome Questionnaire - 45.2 (OQ-45.2)

The Outcome Questionnaire-45.2 by Lambert and colleagues (1996) monitors patient progress through 45 Likert scale questions ("Never," "Rarely," "Sometimes," "Frequently," "Almost Always") that address symptom distress, interpersonal relations, and social role functioning, representing three subscales and an overall score. In a clinical sample, internal consistency reliabilities were α =.92 for Symptom Distress, α =.74 for Interpersonal Relations, α =.71 for Social Role Performance, and α =.93 for Total Score, indicating good reliability for OQ-45.2 Total Score and Symptom Distress subscale, while Interpersonal Relations and Social Role subscales had internal consistency coefficients were sufficient (Boswell et al., 2013). In this study at session 5, the internal consistency for Total Score was α =.83 for the telehealth patients and α =.90 for the in-person patients.

Telehealth Usability Questionnaire (TUQ)

Developed by Parmanto and colleagues (2016), this measure builds upon existing questionnaires to respond to the evolving nature of telehealth technologies. There are 21 7-point Likert-scale questions (1= "strongly disagree" to 7= "strongly agree") that comprise an overall score and the following subscales: usefulness, ease of use, effectiveness, reliability, and satisfaction. Cronbach coefficient alpha's for each variable range from .79-.92 (raw) and .81-.93 (standardized), thus indicating "good" to "excellent" reliability in all variables of usability (Parmanto et al., 2016). In this study at session 5, internal reliability for overall score was α =.98.

Telehealth Usability Questionnaire (TUQ) – for Therapists

The Telehealth Usability Questionnaire (TUQ) has been validated through perspectives of a simulated clinician and patient (Parmanto et al., 2016). Reliability of all subscales and overall score are $\alpha > .8$. The language of the questions can be modified to be appropriate for patient or clinician (Lee et al., 2021; Parmanto et al., 2016; Xu et al., 2021). For this study, modifications for specific items and corresponding scales for the trainee therapist were consistent with research by Lee and colleagues (2021) and responses were rated on a seven-point Likert scale. In this study at session 5, internal reliability for overall score was $\alpha = .98$.

Table 1

Data Collection: Patient

Measure	Time		
	Session 1	Session 3	Session 5
Demographic	x		
Outcome Questionnaire (OQ-45.2)	x		x
Working Alliance Inventory (WAI-SR)	x	x	x
Telehealth Usability Questionnaire (TUQ)	x	x	x

Table 2

Data Collection: Trainee Therapist

Measure	Time		
	Session 1	Session 3	Session 5
Demographic	x		
Working Alliance Inventory (WAI-SR-T)	x	x	x
Telehealth Usability Questionnaire (TUQ)	x	x	x

Chapter 4

RESULTS

Data Preparation

Data collected electronically (Qualtrics) were entered into SPSS Statistics 29 Data Entry for data analysis. Data were screened for accuracy and plausibility and assessed for missing values. Missing data was imputed by using the mean across available items for the respective item or construct (Newman, 2014). Outliers were then identified using Tukey's method of outliers. The following data points were beyond 1.5 interquartile range (IQR) beyond the 1st and 3rd quartiles: one patient's OQ change score, one telehealth trainee therapist's WAI total score at each of the three data points, one patient's TUQ total score at session 5, and one trainee therapist's WAI total score at session three (combined in-person and telehealth). As none of the data were greater than k=3 (suggesting a "far out" outlier), and due to the small sample size, the decision was made to retain the outliers.

Data were screened for normality through Shapiro-Wilk Test of Normality given this test's suitability for small sample sizes (Mishra et al., 2019) . Following this guideline, the following study variables were determined to be normally distributed: WAI-SR total scores for patients at session 1, WAI-SR total scores for telehealth patients at session 5, WAI-SR-T total scores for telehealth trainee therapists at session 5, TUQ total scores for telehealth patients at session 5, TUQ total scores for telehealth trainee therapists at session 5, WAI Change Score for patients, OQ Change Score for patients. Normality of distributions was also supported by obtaining z scores (dividing the skew value by the standard error and dividing the excess kurtosis

by the standard error). The absolute value for each z score was less than 1.96, which is sufficient for a small sample (n <50; Mishra et al., 2019).

The following variables were not normally distributed: Working Alliance Inventory total scores for trainee therapists (WAI-SR-T) at session 1, 3, and 5 and Working Alliance Inventory total scores for patients (WAI-SR) at session 3 and 5. These variables were analyzed using non-parametric statistical analyses; therefore, variables were not transformed. (See Appendix F & G for means of variables for patients and trainee therapists, respectively.)

Sample Characteristics

The sample (N= 24 dyads) consisted of 15 telehealth dyads and 9 in-person dyads. For telehealth cases, there were 8 different trainee therapists (2 from ICC and 6 from Nia) across the 15 dyads included in the data analyses as seen in Figure 3. For in-person cases, there were 6 different trainee therapists (from ICC) across the 9 cases as seen in Figure 4. Two of the ICC trainee therapists participated in the study with both in-person and telehealth cases.

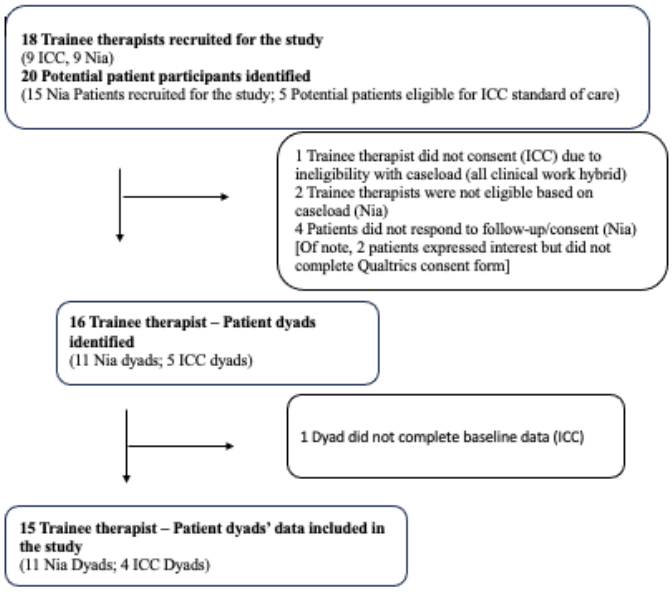

Figure 3

Telehealth Recruitment and Participation

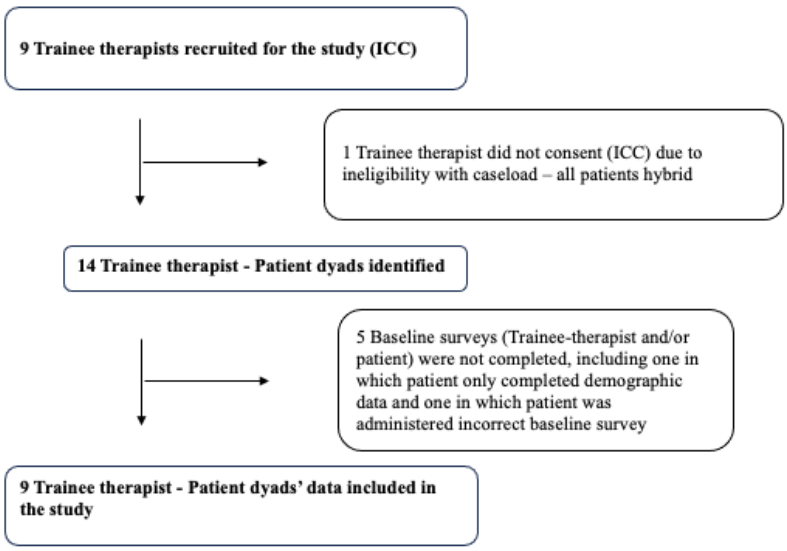

Figure 4

In-Person Recruitment and Participation

Sample characteristics for the 24 patients (15 telehealth, 9 in-person) are shown in Table 3. There was a higher proportion of females in the telehealth group (n=12, 80.0%) compared to the in-person group (n=4, 44.4%). Additionally, the telehealth group consisted of more racially diverse patients (60.0% Black/African American, 13.3% white, 6.7% American Indian/Native American, 6.7% Israelite) compared to the in-person group, which consisted of majority white participants (55.6% white, 44.4% Black). Additionally, 100% of patients in the telehealth condition had previous experience with therapy compared to 78% of patients in the in-person modality.

Sample characteristics for the 14 trainee therapists (8 telehealth, 6 in-person) are shown in Table 4. Most trainee therapists in the telehealth group identified as female (n=7, 87.5%) whereas there was more gender diversity in the in-person group with an equal number of trainee therapists identifying as male, female, and non-binary (n=2, 33.3%, respectively).

Table 3

Patient Characteristics

Variable	Telehealth (N=15)		In-Person (N=9)	
	n	%	n	%
Gender				
Male	3	20.0	4	44.4
Female	12	80.0	4	44.4
Transgender			1	11.1
Sex				
Male	3	20.0	4	44.4
Female	12	80.0	3	33.3
Transgender			1	11.1
Did not respond			1	11.1
Race				
Black/African American	9	60.0	4	44.4
White	2	13.3	5	55.6
American Indian/Native American	1	6.7		
Other: Israelite	1	6.7		
Other: Choose not to answer	2	13.3		
Ethnicity				
Hispanic/Latinx			1	11.1
Not Hispanic/Latinx	12	80.0	7	77.8
Did not respond	3	20.0	1	11.1
Sexual Orientation				
Heterosexual	11	73.3	4	44.4
Gay	0	0.0	1	11.1
Bisexual	1	6.7	2	22.2
Other: lesbian	1	6.7		
Other: Pansexual	1	6.7		
Other: Queer	1	6.7		
Did not respond			2	22.2
Relationship Status				
Single, never married	9	60.0	5	55.6
Married	1	6.7		
Divorced	4	26.7	1	11.1
Widowed			1	11.1

Living with partner	1	6.7		
Did not respond			2	22.2
Education				
Elementary school only			1	11.1
Some high school, did not finish	2	13.3	1	11.1
Completed high school or equivalent	3	20.0	2	22.2
Some college, did not finish	2	13.3	3	33.3
Two-year degree	1	6.7		
Four-year degree	4	26.7	1	11.1
Some graduate work	3	20.0		
Did not respond			1	11.1
Employment				
Full time	6	40.0	2	22.2
Part time	1	6.7	3	33.3
Unemployed/looking for work	1	6.7	1	11.1
Student				
Homemaker				
Retired				
Unable to work	2	13.3	1	11.1
SSI/SSD/Disability	5	33.3	1	11.1
Did not respond			1	11.1
Previous therapy				
Yes	15		7	77.8
No			2	22.2
If yes, length of previous therapy				
< 1 month			3	42.9
> 1 month < 6 months	1	6.7	1	14.3
>6 months < 1 year	2	13.3		
>1 year	5	33.3	1	14.3
Unsure	1	6.7		
Did not respond	6	40.0	2	28.6
If yes, delivery mode of therapy				
Telehealth	3	20.0%		
In-Person	5	33.3%	7	100
Combination of telehealth and in-person	7	46.7%		

Variable	Mean	Std. Deviation	Median
Age (Telehealth)	44.53	11.95	47.00
Age (In-Person)	45.56	14.83	42.00

Table 4

Trainee Therapist Characteristics

Variable	Telehealth (N=8)		In-Person (N=6)	
	n	%	n	%
Gender				
Male	1	12.5	2	33.3
Female	7	87.5	2	33.3
Non-binary			2	33.3
Sex				
Male	1	12.5	2	33.3
Female	7	87.5	4	66.6
Race				
Black/African American	4	50.0	1	16.7
White	4	50.0	4	66.7
Other: Not specified			1	16.7
Ethnicity				
Hispanic/Latinx			1	16.7
Not Hispanic/Latinx	8	100.0	5	83.3
Sexual Orientation				
Heterosexual	5	62.5	4	66.7
Bisexual	1	12.5	1	16.7
Other: Queer	1	12.5		
Other: Not specified	1	12.5	1	16.7
Relationship Status				
Single, never married	4	50.0	5	83.3
Married	2	25.0		
Divorced	1	12.5	1	83.3
Living with partner	1	12.5		
Previous training in telepsychology?				
Yes, as a result of COVID-19	4	50.0	1	16.7

Yes, prior to COVID-19				
No	2	25.0	2	33.3
Unknown (session 5 not completed)	2	25.0	3	50.0

Variable	Mean	Std. Deviation	Median
Age (Telehealth)	29.69	4.10	30.00
Age (In-Person)	29.00	5.18	29.50

Of the 24 dyads that were enrolled in the study, 11 were trainee therapists and patients from Nia (11 telehealth) and 13 were from ICC (4 telehealth, 9 ICC). Of the 15 telehealth dyads, 11 completed all six surveys, including one patient survey (telehealth dyad 5) that had missing data. Of the remaining telehealth dyads, one dyad (telehealth dyad 12) did not complete due to early termination, and two dyads (telehealth dyads 14 and 15) had missing surveys for unknown reasons. Of the 9 in-person dyads included in data analysis, 4 completed all survey requirements. Of the remaining 5 dyads, three dyads (in-person dyads 5, 7, 8) transitioned to hybrid services and two dyads (in-person dyads 6 and 9) had an interruption in services and were unable to complete the study. Survey completion by dyad is shown in Table 5. (See Appendix H for In-Person WAI Score by Case, Appendix I for Telehealth Patient WAI Score by Case, Appendix J for In-Person Trainee Therapist WAI Score by Case, and Appendix K for Telehealth Trainee Therapist WAI Score by Case.)

Table 5

Survey Completion by Dyad

Case	Site	Trainee Therapist Survey Completed			Patient Survey Completed		
		Session 1	Session 3	Session 5	Session 1	Session 3	Session 5
		Telehealth					
1	ICC	x	x	x	x	x	x
2	ICC	x	x	x	x	x	x
3	ICC	x	x	x	x	x	x

4	Nia	x	x	x	x	x	x
5[a]	Nia	x	x	x	x	x	
6	Nia	x	x	x	x	x	x
7	Nia	x	x	x	x	x	x
8	Nia	x	x	x	x	x	x
9	Nia	x	x	x	x	x	x
10	Nia	x	x	x	x	x	x
11	Nia	x	x	x	x	x	x
12[b]	ICC	x			x		
13	Nia	x	x	x	x	x	x
14[d]	Nia	x			x	x	
15[d]	Nia	x	x		x	x	x
			In-person				
16	ICC	x	x	x	x	x	x
17	ICC	x	x	x	x	x	x
18	ICC	x	x	x	x	x	x
19	ICC	x	x	x	x	x	x
20[c]	ICC	x	x		x	x	
21[b]	ICC	x			x		
22[c]	ICC	x			x		
23[c]	ICC	x			x		
24[b]	ICC	x			x		

[a] Missing TUQ and Tasks, Goal, Overall WAI; Dyad completed 5 sessions. [b] Missing survey data due to interruption in services and/or early termination. [c] Missing survey data due to transition to hybrid. [d] Missing survey data due to unknown reason.

Outcome Analyses

Hypothesis 1 and 2

Research Question 1: *Does therapeutic alliance develop in the same way between in-person psychotherapy and synchronous, videoconferencing psychotherapy?* Two hypotheses were developed and tested: (1) *Trainee therapists will report higher alliance scores (WAI bond, task, goal, composite) for in-person therapy compared to their alliance scores for*

videoconferencing psychotherapy, and (2) *Patients will report higher alliance scores (WAI bond, task, goal, composite) for in-person therapy compared to their alliance scores for videoconferencing psychotherapy.*

Rationale

The rationale for hypothesis one is that Lin, Stone, Heckman, and Anderson (2021) reported that therapists perceived significantly less competence in alliance when comparing telepsychology to in-person psychotherapy. Ertelt and colleagues (2011) also noted that therapists rated tasks, bond, and goals significantly higher in in-person therapy compared to telehealth. Rationale for hypothesis 2 is that research with patient ratings of alliance in telepsychology have been mixed due to limited research in this area and limited external generalizability to low-income individuals due to much of the research being conducted in research clinics compared to the participants' private locations (Norwood et al., 2018; Seuling et al., 2023).

Statistical Analysis

Due to the data being non-normally distributed, a non-parametric test was used to compare independent samples. Mann-Whitney U tests were conducted to determine if there were differences in composite alliance scores between telehealth and in-person psychotherapy for trainee therapists and patients, as seen in Table 6 and Table 7, respectively. There were two trainee therapists who participated in both in-person and telehealth cases. These cases (n=4) were removed to fulfill the assumption of independence of observations for Mann-Whitney U test.

At each of the three sessions examined (session 1, session 3, and session 5), no statistically significant differences were found between groups for trainee therapists' alliance score between in-person and telehealth. For trainee therapists at session 1, distributions of the

alliance scores for telehealth and in-person were similar, as assessed by visual inspection. Alliance scores for telehealth (Mdn=48.00, n=11) and in-person (Mdn=45.00, n=9) were not statistically significant, *U*=28.000*, z*=-1.645*, p*=.112, using an exact sampling distribution for *U* (Dinneen & Blakesley, 1973; Laerd Statistics, 2015). For trainee therapists at session 3, distributions of the alliance scores for telehealth and in-person were not similar, as assessed by visual inspection. Alliance scores for telehealth (mean rank =9.00, n=10) and in-person (mean rank=6.00, n=5) were not statistically significant, *U=15.000, z=-1.252, p*=.254, using an exact sampling distribution for *U* (Dinneen & Blakesley, 1973; Laerd Statistics, 2015). For trainee therapists at session 5, distributions of the alliance scores for telehealth and in-person were not similar, as assessed by visual inspection. Alliance scores for telehealth (mean rank =7.00, n=9) and in-person (mean rank =7.00, n=4,) were not statistically significant, *U*=18.000*, z*=.000*, p*=1.000, using an exact sampling distribution for *U* (Dinneen & Blakesley, 1973; Laerd Statistics, 2015).

At two of the three sessions examined (session 1 and session 5) for patients, no statistically significant differences were found between groups for patients' alliance score between in-person and telehealth. For patients at session 1, distributions of the alliance scores for telehealth and in-person were not similar, as assessed by visual inspection. Alliance scores for telehealth (mean rank =9.95, n=11) and in-person (mean rank =11.17, n=9) were not statistically significant, *U*=55.500*, z*=.456*, p*=.656, using an exact sampling distribution for *U* (Dinneen & Blakesley, 1973; Laerd Statistics, 2015). For patients at session 3, distributions of the alliance scores for telehealth and in-person were not similar, as assessed by visual inspection. Alliance scores were statistically significantly higher in the in-person psychotherapy group (mean rank =12.70, n=5) than in the telehealth psychotherapy group (mean rank=6.59, n=11), *U*=48.500*,*

z=2.386, p=.013, using an exact sampling distribution for *U* (Dinneen & Blakesley, 1973; Laerd Statistics, 2015). For patients at session 5, distributions of the alliance scores for telehealth and in-person were not similar, as assessed by visual inspection. Alliance scores for telehealth (mean rank =5.89, n=9) and in-person (mean rank =9.50, n=4) were not statistically significant, *U*=28.00, *z*=1.569, *p*=.148, using an exact sampling distribution for *U* (Dinneen & Blakesley, 1973; Laerd Statistics, 2015).

Table 6

Mann-Whitney U Hypothesis Test Summary for Trainee Therapist Alliance

Variable	Telehealth (*n*)	In-Person (*n*)	*U*	*z*
	Mdn Rank			
Session 1 WAI	48.00 (11)	45.00 (9)	28.00	-1.65
	Mean Rank			
Session 3 WAI	9.00 (10)	6.00 (5)	15.00	-1.25
Session 5 WAI	7.00 (9)	7.00 (4)	18.00	.00

Note: Session 1 distributions of alliance scores were similar, as assessed by visual inspection. Session 3 and 5 distributions were not similar, as assessed by visual inspection.

Table 7

Mann-Whitney U Hypothesis Test Summary for Patient Alliance

Variable	Telehealth (*n*)	In-Person (*n*)	*U*	*z*
	Mean Rank			
Session 1 WAI	9.95 (11)	11.17 (9)	55.50	.46
Session 3 WAI	6.59 (11)	12.70 (5)	48.50	2.39*
Session 5 WAI	5.89 (9)	9.50 (4)	28.00	1.57

Note: Distributions of alliance scores were not similar, as assessed by visual inspection.

**p<.05.*

Hypothesis 3 and 4

Research Question 2: *Is there a relationship between higher patient-rated alliance and symptom reduction during the early phase of therapy (sessions 1-5) for both in-person and*

synchronous videoconferencing groups? Two hypotheses were developed and tested: (3) *Higher alliance scores reported by patients in videoconferencing telepsychology will be correlated with greater symptom reduction (symptom distress, interpersonal relations, and social role) in the early phase of therapy, which will be assessed at sessions 1 and 5;* and (4) *Higher alliance scores reported by patients in in-person therapy will be correlated with greater symptom reduction (symptom distress, interpersonal relations, and social role) in the early phase of therapy, which will be assessed at sessions 1 and 5.*

Rationale

The rationale for hypotheses 3 and 4 is that research supports that there is a positive relationship between therapeutic alliance and outcome (e.g., symptom reduction; Baldwin et al., 2007; Flückiger et al., 2018; Lambert & Barley, 2002; Wampold, 2015), including in the early phase of treatment (Flückiger et al., 2020; Lin, Anderson, et al., 2022).

Statistical Analysis

This aim was examined via Pearson correlation (*r*). Due to small sample size, one analysis was conducted for all patients in both modalities (telepsychology and in-person) using the WAI change score between session 1 and 5 and the OQ-45.2 change score between session 1 and session 5. There was no statistically significant relationship between alliance scores and symptom reduction for patients, $r(14) = -.04$, $p = .891$.

Hypothesis 5 and 6

Research Question 3: *Are therapeutic alliance scores impacted by attributes of using a telehealth system?* Two hypotheses were developed and tested: (5) *Patient ratings on the Telehealth Usability Questionnaire (TUQ) will be positively correlated with their ratings on measures of working alliance (WAI-SR) such that higher usability ratings will be correlated with*

higher alliance ratings and vice versa; and (6) *Trainee therapist ratings on the Telehealth Usability Questionnaire (TUQ) will be positively correlated with their ratings on measures of working alliance (WAI-SR-Therapist) such that higher usability ratings will be correlated with higher alliance ratings and vice versa.*

Rationale

The rationale for hypotheses 5 and 6 is that though telepsychology is often touted to increase access for people living in rural areas, Pierce and colleagues (2021) caution that rural psychologists and patients may have limited access to technology or adequate wi-fi. Additionally, telehealth may be inaccessible to low-income clients due to digital disparities, lack of access to devices, and connectivity issues (Schriger et al., 2022). Therefore, patients in this study may have limited digital literacy and/or access to adequate wi-fi, making it more difficult to engage in psychotherapy and thus impact the development of the therapeutic alliance.

Statistical Analysis

Pearson correlation (*r*) was conducted for telehealth dyads on Telehealth Usability Questionnaire (TUQ) and working alliance (WAI-SR/ WAI-SR-T). For patients, there was no statistically significant relationship between alliance scores and telehealth usability, $r(10) = -.31$, $p = .333$. For trainee therapists, there was no correlation between alliance scores and telehealth usability, $r(10) = -.29$, $p = .360$.

Chapter 5

DISCUSSION

This study was a naturalistic study that aimed to compare and understand the development of the therapeutic alliance between in-person and videoconferencing psychotherapy for trainee therapists and for patients. The study examined the perceptions of alliance development among trainee therapists and among patients. While telepsychology use has increased exponentially in recent years, especially due to the shift to telehealth as a result of the COVID-19 pandemic, research has revealed mixed results regarding the development of the alliance between in-person and telehealth as well as between trainee therapists and patients. Additionally, much of the existing research has been conducted in the form of randomized controlled trials (RTCs) and with privileged populations. Therefore, this study addresses a gap in the literature by examining the development of the therapeutic alliance in a sample of low-income patients and trainee therapists from clinics providing no-cost therapy.

Study Findings

Overall, results of this study did not support the proposed hypotheses. First, trainee therapists did not report statistically significant differences in their ratings of alliance between in-person and videoconferencing sessions during the first five sessions with a new patient, and the same was seen for patients during the first and fifth session. Interestingly, at the third session, patients engaging in in-person therapy reported statistically significant higher alliance scores compared to the patients who were engaging in telepsychology. Ardito and Rabellino (2011) suggest that peak alliance occurs at session three. While this "peak" was not seen consistently

across both patient and trainee therapist data in the current sample, there was a significant difference seen for patients between modalities (videoconferencing vs. in-person). Therefore, is possible that session three of a new therapeutic relationship could be a critical time point in the development of the alliance. However, this finding should be interpreted with caution due to unequal cell sizes and restricted range of scores on the Mann-Whitney U test. Due to limited power, it is not recommended to generalize this finding to a larger sample, though it can offer preliminary support for future research.

The finding that therapists did not have significant differences in alliance scores between in-person and videoconferencing is in contrast to existing literature that therapists perceive weaker alliance in telehealth compared to in-person therapy (Ertelt et al., 2011; Seuling et al., 2023), despite seemingly similar outcomes (Flückiger et al., 2018; Lin, Heckman, et al., 2022). Again, the findings in this study should be interpreted with caution due to limited sample size and unequal cell sizes.

Second, results of this study did not support that there is a significant relationship between higher alliance scores and improved outcome, which is in contrast to existing literature suggesting that the development of the alliance in the early phase of therapy is predictive of outcome (Flückiger et al., 2018; Lin, Anderson, et al., 2022). This discrepancy between the current study and existing literature may be due to several factors. Cook and Doyle (2002) found results consistent with literature regarding in-person working alliance that severity and type of presenting problem are not related to the development of working alliance on telehealth. However, this finding may not be reflective of the sample in the current study. One way to consider the current finding is that the alliance-outcome relationship is not a one-size-fits-all relationship (Zilcha-Mano & Errázuriz, 2015). Zilcha-Mano and Errázuriz (2015) report that

"although for the average patient a stronger alliance is associated with better outcome, for a particular class or subgroup of patients, defined by specific clinical conditions, no such association may exist" (p. 588). While there is not extensive research about the extent to which patient characteristics can moderate the alliance-outcome relationship, there is research to suggest that individual patient characteristics introduce variability on the effect of alliance on symptom change. For example, patients presenting with personality disorders showed a six times larger alliance effect than other patients, and there was still quite a bit of unexplained variance suggesting other moderating factors (Falkenström et al., 2013), and other research suggests variability for the strength of this relationship for individuals diagnosed with borderline personality disorder (Flückiger et al., 2018). Further, patients who present with substance use and eating disorders have smaller effect sizes for the alliance-outcome association compared with other diagnoses (Flückiger et al., 2018). Additionally, the number of previous depressive episodes moderates the alliance-outcome relationship such that alliance is predictive of outcome if an individual has 0-2 prior depressive episodes but not if the patient has had three or more depressive episodes (Lorenzo-Luaces et al., 2014). Beyond diagnostic criteria, patients may present to treatment with interpersonal dysfunction that can potentially lead to difficulties with aspects of therapy such as creating and establishing a therapeutic relationship or collaborating in treatment (Zilcha-Mano, 2017). This is especially relevant when considering the importance of the initial bond to facilitate the three pathways for the process and outcome as depicted in the Contextual Model.

As this research applies to the current study, patients presented to therapy with a range of diagnoses. Due to incomplete dyad data, not all provisional diagnoses were identified; however, the diagnoses provided included personality disorders, substance use disorders, depressive

disorders, trauma and stressor related disorders, anxiety disorders, and psychosocial stressors that have a negative impact on mental health (reflected by Z codes). Taken together, patient characteristics may play a pivotal role in the lack of significant findings in the outcome-alliance relationship in this study. Furthermore, with such a limited sample, it is likely that we are not observing a representation of the "average patient" but rather observing the effect of heterogeneity of moderators in this alliance-outcome relationship.

Finally, results of this study did not support a significant relationship between therapeutic alliance and telehealth usability at session 5. Consistent with existing literature that mental health professionals have significantly more positive ratings of telehealth compared with other medical professionals (Xu et al., 2021), the trainee therapists in this study had high ratings of telehealth usability. An interesting observation is that trainee therapists' perception of usability (usefulness, ease of use, effectiveness, reliability, satisfaction, and overall), marginally increased from the first session to the fifth session. On the other hand, patients were observed to marginally increase their perception of usability between the first and third session but then decrease their usability ratings below their initial baseline rating.

In fact, for both patients and trainee therapists, there was a negative correlation such that as usability decreased, alliance increased. Both patients and trainee therapists were observed to rate reliability the lowest of all subscales. This subscale included a question related to the telehealth system being "the same as" an in-person visit as well as two questions about recovering after making a mistake while using the system and the system giving error messages that tell how to fix the problem. Lopez and colleagues (2019) address that technological difficulties can be a barrier in the relationship between telehealth and the alliance and that there are unavoidable problems with technology that lead to interruptions in treatment, which can be a

hinderance on the relationship. However, they suggest that if the therapist and patient work together and plan for technological interruptions, "this can be beneficial in strengthening the relationship by demonstrating that it is the patient, not the communication method, that is most important" and that "an awareness and a shared understanding of the nature of the potential pitfalls of using technology for treatment, as well as a willingness to talk through technology-related frustrations, may help to keep the therapeutic alliance intact through any technical difficulties" (Lopez et al., 2019, p. 76). In other words, perhaps the patients and trainee therapists in this study were able to strengthen the alliance by proactiveness and reactiveness to barriers that may arise with telehealth usability. Therefore, the researchers' recommendation to plan and provide education (Lopez et al., 2019) may serve as a protective factor, especially for populations that may have limited digital literacy and systemic barriers that interfere with optimal telehealth usability, such as this sample.

Limitations

A significant limitation to this study is the small sample size, especially for in-person dyads. Care was taken to increase sample size and encourage completion of the study; nevertheless, "missing data are a natural and unavoidable consequence of the ethical principle of respect for persons" (Newman, 2014, p. 381) because research participation is voluntary and participants are informed in the consent process that they may discontinue the study at any time without penalty. Nevertheless, efforts were taken by the researcher to increase recruitment and study completion in both groups through personalization of the survey invitation (through email, call, and/or text), giving advanced notice, and using identification numbers (Newman, 2014).

Additionally, there was differential attrition between the in-person and videoconferencing groups. There was a non-random missing data pattern in the in-person group, wherein less than

half of the dyads enrolled in the study (44.4%) completed the requirements of the study. Of the videoconferencing dyads, 73.3% completed the study requirements for data analysis. One-third of the in-person dyads were no longer eligible to participate in the study due to a transition to hybrid services. Not only did this contribute to the low sample size used for data analysis, but also it may have introduced additional bias into the results. Specifically, The Nia Project was providing exclusively telehealth services, whereas ICC offered both in-person and telepsychology services. As a result of the flexibility with treatment modality at ICC, some patients elected hybrid sessions, which rendered them ineligible for the study. Because this transition to a different modality was not an option for Nia Project patients, the differential attrition poses two additional considerations (1) Patients in the telepsychology group may have remained eligible for the study simply because there was not an option to transition to hybrid services, such as was seen with ICC patients. (2) When cases were removed from the telepsychology group analysis to satisfy independence of observations for non-parametric Mann-Whitney U test, this resulted in an unintentional comparison of exclusively Nia dyads (videoconferencing) with exclusively ICC dyads (in-person). Therefore, this may have introduced additional confounds beyond the modality of services because there may be additional variability between the two sites.

Both The Nia Project and ICC serve patients with complex presentations. However, there may be a difference in the level of engagement from patients. The patients at the ICC sites were presenting for other services (such as primary care and case management) and referred to or offered therapy. Conversely, Nia patients intentionally sought out mental health care. Therefore, there may have been differences within and between-groups based on patients' engagement with

and commitment to therapy. Thus, this may impact the patients' orientation toward tasks and goals, which are constructs that contribute to the therapeutic alliance.

Further, the study procedure differing between sites (Nia, ICC) may introduce additional sources of bias. Because data collection is part of the Standard of Care at ICC and patients consented for their deidentified data to be used in research, patients in the dyad were not recruited for the study. Therefore, ICC may represent a broader sample of the population whereas Nia patients were recruited by the researcher and offered to participate or decline participation; therefore, the study may be susceptible to sampling bias. Social desirability may also influence respondents' survey responses. Patients at Nia were informed by the researcher that their data would not be shared with their trainee therapist (unless there was an imminent safety concern) whereas the patients at ICC were informed by their trainee therapist that their responses would be used for clinical utility. Therefore, patients at ICC may have responded in a way to present more favorably to their trainee therapist.

This difference in attrition may also be related to patients' readiness, commitment, engagement, and expectations in mental health treatment. Because patients from ICC were referred for mental health treatment from their primary care/specialty care provider, they may have a different outlook on therapy compared to patients from Nia who independently expressed a desire in mental health treatment. Treatment expectancy and treatment credibility have been found to be predictive of treatment outcome, and scholars have encouraged assessing these variables when comparing therapy conditions (Devilly & Borkovec, 2000). Because this study did not assess expectancy and credibility, it is uncertain if patients differed on these constructs which may have contributed to differences in outcome. This study could have been strengthened by including a measure such as the Credibility/Expectancy Questionnaire, which is a two-factor

measure that assesses cognitively based credibility and affectively based expectancy (Devilly & Borkovec, 2000).

Ultimately, due to low sample size, there is a possibility that the statistically significant difference in patients' alliance scores between in-person and videoconferencing at session 3 was a type I error due to low sample size and uneven cells and that there may be an increased risk of type II error, wherein there was not enough power to detect a significant difference between groups for the remaining hypotheses. While it is not recommended to generalize these results, this study provides preliminary findings for future research to build upon. Finally, unbalanced participation of dyads among clinics and removal of cases from statistical analysis due to a limitation in study design contributed to overall limitations of this project.

Implications and Future Directions

As Morland and colleagues (2015) emphasize regarding telepsychology, "… we need to shift from effectiveness to implementation research. We now need to distribute practical information to practitioners regarding the use of telemedicine in the delivery of evidence-based treatments" (p. 818). Despite the limitations in this study, this study has several strengths and serves as a contribution to the field of Counseling Psychology. This study aligns with Counseling Psychology's four pillars: bringing psychological services to the underserved, infusing counseling psychology values in training, education, and continuing education, promoting social justice, and integrating cultural factors (Cooper et al., 2019). Marginalized populations are underrepresented in research (Cook & Doyle, 2002; Reis et al., 2021) and there is a focus on randomized controlled trials which may result in limited applicability to clinical settings (Lin, Heckman, et al., 2022; Schriger et al., 2022). Therefore, this study adds to the literature by increasing the breadth of naturalistic studies, specifically with an underrepresented sample of

patients who are economically disadvantaged and receive free mental health services from trainee therapists during their master's, doctoral, and post-doctoral training in counseling and psychology. The study contributes to exploring how socioeconomic factors may impact patient's ability to seek and engage in mental health treatment.

As mentioned previously, the rates of attrition between groups varied, which contributed to limitations of the study. Specifically, 55.6% of dyads from the Integrated Care Clinics, which are primary care/specialty care clinics did not complete requirements of the study. Therefore, this population may not represent the ideal recruitment group to examine the research question of the development of the therapeutic alliance between in-person and telepsychology. Instead, future study design would be improved by comparing a sample of patients who present as more consistent with treatment, such as those receiving treatment at an outpatient mental health clinic or private practice.

While results of this study are limited due to small sample size, this study contributes to literature that may help increase competence in decision-making (in-person vs. telepsychology) and in thinking about how to increase access to psychological services for the underserved. For example, an interesting observation with this study was that low patient scores on bond in the first session were an indication of drop-out. In the in-person group, two dyads dropped out of the study due to interruption of services/early termination. Those two dyads started with the lowest scores in bond. However, the in-person patients who remained in therapy for the first 5 sessions and completed the study seem to report marginally higher alliance scores when compared to the trainee therapists. Of the three dyads who did not complete the study in the videoconferencing group, one was due to early termination/interruption in services, and the patient in this dyad also reported a relatively weak bond. Previous research has highlighted the importance of a strong

therapeutic alliance for continuity of treatment (Flückiger et al., 2018; Sharf et al., 2010). In fact, research supports that the first session – even the first 10 minutes of the first session – is important for the development of the alliance (Anderson et al., 2019). Anderson and colleagues (2019) found that therapeutic alliance mediated the effect of client distress on dropout within the first four sessions of therapy. Future research may investigate the impact of bond in the initial session on attrition in therapy.

This finding has clinical implications for trainee therapists during the first session of a new therapeutic relationship. Perhaps they can be more intentional and move at a slower pace to cultivate the therapeutic alliance. Research has suggested that alliance can be enhanced by attempting to troubleshoot barriers to pre-therapy experiences and being especially present and attentive to the patient during the first session (Anderson et al., 2019). Additionally, in the current study, patient reports on telehealth usability indicate reliability as the area needing the most attention; therefore, trainee therapists may make an extra effort to assist patients with attempting to make the virtual services comparable to if they were meeting together in-person and with troubleshooting errors with the telehealth system when they arise.

As research generally supports that outcome in telepsychology is comparable to services provided in-person, there needs to be future research to understand how to implement and integrate telehealth into existing systems and specific treatment modalities (Morland et al., 2015). From an education and training perspective, trainees will likely continue serving clients both in-person and via telepsychology; therefore, it is imperative to develop skills and increase awareness of how the therapeutic alliance develops in both modalities. This may include adapting telehealth to increase flexibility and approaches that depart from what may be perceived as standard therapeutic practices (Campbell & Selby-Nelson, 2020). As seen with the rapid

determination of the initial bond (Wampold & Imel, 2015), it is necessary to understand the development of the alliance with the addition of technology and the absence of physical proximity. In this different way of cultivating the bond, goals, and tasks, it may require "diverse relational resources and different levels of intimacy and intensity. The therapist and client must find the level of collaboration suited to achieve the work of therapy – even if they do not have face-to-face contact" (Horvath et al., 2011, p. 56). Campbell and Selby-Nelson (2020) advise that the working alliance can be strengthened by increased awareness and acknowledgement of social class cues by the patient (e.g., self-consciousness, uncertainty, embarrassment) and therapist (e.g., décor of space, vocabulary). These social class cues in the telepsychology realm may be related to considerations such as digital literacy or availability of a private space for sessions. Further, therapists aim to "use a broad range of culturally-informed and culturally-sensitive practices" in working with individuals and communities (American Psychological Association, 2022). Therefore, it is worthwhile to explore how these social class cues can exist in the virtual space and how therapy (and the therapist) needs to adapt to these cues to enhance the alliance.

Another area of future study is the feasibility of in-person services for this population. Of the five dyads who did not complete the study in the in-person group, three of the dyads transitioned to hybrid services. As mentioned previously, patients from ICC were presented with the option to engage in either in-person or telepsychology. While there was dropout in both groups, it appears that it was more feasible for these patients to remain engaged in therapy when there was the option to meet with their therapist virtually. On the other hand, there was less attrition with the Nia group; however, for these patients, videoconferencing was the only option so it cannot be generalized that telehealth is overall more feasible or preferred by this population. Overall, in the videoconferencing group, patient's scores reflect that their perception of

telehealth usability increased between the first and the third session, but by the fifth session, it decreased beyond the initial rating, and these patterns were seen for the overall usability and for each domain (usefulness, ease of use, effectiveness, reliability, satisfaction). Therefore, for the patients in the telepsychology group, they may have remained engaged in therapy because there was not an alternative mode, despite potential concerns of usability. It is beyond the scope of this project to hypothesize the reason for a patient's preference. Ideally, the decision for in-person or videoconferencing therapy would be based on a balance of clinical judgement and client need (Cooper et al., 2019). More research is needed to understand the preference and feasibility of in-person and telepsychology modalities for patients in underserved populations.

In conclusion, the therapeutic alliance is "the bedrock of psychotherapy effectiveness" (Wampold & Imel, 2015, p. 50), and it is central to both the process and outcome of psychotherapy, whether that service is delivered in-person or via telepsychology. Findings from this study highlight the nuance of this relationship and the importance of continuing to examine how the therapeutic alliance develops between in-person and videoconferencing psychotherapy, especially in naturalistic, community-based settings.

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APPENDIX A

Demographic Questions (Client)

- What is your age?
- What is your gender?
    - Male
    - Female
    - Non-binary
    - Transgender
    - Other (please describe)
- What is your race?
    - American Indian/Native American
    - Asian
    - Black/African American
    - Hispanic/Latino
    - White/Caucasian
    - Pacific Islander
    - Other (please describe)
- What is your ethnicity?
    - Hispanic
    - Non-Hispanic
- What is your highest education level?
    - Elementary school only (kindergarten – 8th grade)
    - Some high school but did not complete
    - Completed high school or the equivalent (GED)
    - Some college, but did not finish
    - Two-year college (A.A./A.S.)
    - Four-year college (B.S/B.A.)
    - Some graduate work
    - Completed Masters or professional Degree
    - Completed advanced graduate work or PhD
- What is your employment status?
    - Employed full-time
    - Employed part-time
    - Unemployed/looking for work
    - Student
    - Homemaker
    - Retired
    - Unable to work
    - SSI/SSD/Disability
- Relationship status:

    - Single, never married
    - Divorced
    - Separated
    - Widowed
    - Living with partner
- Sexual orientation
    - Straight
    - Gay
    - Bisexual
    - Questioning
    - Other (please describe)
- Have you ever received therapy/counseling?
    - If so, how long?
    - If so, was it in-person or telehealth?

APPENDIX B

Demographic Questions (Trainee Therapist)

- What is your age?
- What is your gender?
    - Male
    - Female
    - Non-binary
    - Transgender
    - Other (please describe)
- What is your race?
    - American Indian/Native American
    - Asian
    - Black/African American
    - Hispanic/Latino
    - White/Caucasian
    - Pacific Islander
    - Other (please describe)
- What is your ethnicity?
    - Hispanic
    - Non-Hispanic
- Relationship status:
    - Single, never married
    - Divorced
    - Separated
    - Widowed
    - Living with partner
- Sexual orientation
    - Straight
    - Gay
    - Bisexual
    - Questioning
    - Other (please describe)
- Have you had training in telehealth?
    - Yes
        - If so, describe the training
    - Yes, but not prior to COVID-19
        - If so, describe the training
    - No
- After session 5 with patient:
    - What is your theoretical orientation?

- What is the provisional diagnosis for the client you worked with for this study?

APPENDIX C

Working Alliance Inventory – Short Revised (WAI-SR)[a]

Working Alliance Inventory – Short Revised (WAI-SR)

Instructions: Below is a list of statements and questions about experiences people might have with their therapy or therapist. Some items refer directly to your therapist with an underlined space – as you read the sentences, mentally insert the name of your therapist in place of _____ in the text. Think about your experience in therapy, and decide which category best describes your own experience.

IMPORTANT!!! Please take your time to consider each question carefully.

1. As a result of these sessions I am clearer as to how I might be able to change.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

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

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

3. I believe___likes me.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

4. ___and I collaborate on setting goals for my therapy.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

5. ___and I respect each other.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

6. ___and I are working towards mutually agreed upon goals.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

7. I feel that___appreciates me.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

8. _____ and I agree on what is important for me to work on.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

9. I feel _____ cares about me even when I do things that he/she does not approve of.

①	②	③	④	⑤

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Seldom Sometimes Fairly Often Very Often Always

10. I feel that the things I do in therapy will help me to accomplish the changes that I want.

① ② ③ ④ ⑤
Seldom Sometimes Fairly Often Very Often Always

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

① ② ③ ④ ⑤
Seldom Sometimes Fairly Often Very Often Always

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

① ② ③ ④ ⑤
Seldom Sometimes Fairly Often Very Often Always

APPENDIX D

Working Alliance Inventory – Short Revised – Therapist Version (WAI-SR-T)[b]

Working Alliance Inventory – Short Revised – Therapist Version (WAI-SR-T)

Instructions: Below are sentences that describe some of the different ways a person might think or feel about his or her client.

As you read the sentences mentally insert the name of your client in place of ___in the text.

If the statement describes the way you always feel (or think) circle the number 5; if it seldom applies to you circle the number 1. Use the numbers in between to describe the variations between these extremes.

1. As a result of these sessions___ is clearer as to how he/she might be able to change.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

2. ___ and I both feel confident about the usefulness of our current activity in therapy.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

3. I believe___likes me.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

4. ___and I have collaborated on setting goals for these sessions.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

5. ___and I respect each other.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

6. We are working towards mutually agreed upon goals.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

7. I appreciate ___ as a person.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

8. We agree on what is important for___to work on.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

9. I respect___ even when he/she does things I do not approve of.

①	②	③	④	⑤

[b] Reprinted by permission of the Society for Psychotherapy Research © 2024.

Seldom Sometimes Fairly Often Very Often Always

10. I feel confident that the things we do in therapy will help ___ to accomplish the changes that he/she desires..

① ② ③ ④ ⑤
Seldom Sometimes Fairly Often Very Often Always

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

① ② ③ ④ ⑤
Seldom Sometimes Fairly Often Very Often Always

12. ___believes that the way we are working with his/her problems is correct.

① ② ③ ④ ⑤
Seldom Sometimes Fairly Often Very Often Always

Scoring Goals = 1(G25), 4(G30), 6(G22), 11(G32); Tasks = 2(T4), 8(T24), 10(T16),12(T35); Bonds = 3(B8), 5(B9), 7(B23), 9(B36).
No item reversals.

APPENDIX E

Telehealth Usability Questionnaire (TUQ)[c]

University of Pittsburgh

School of Health and Rehabilitation Sciences
Department of Health Information Management

6026 Forbes Tower
Pittsburgh, Pennsylvania 15260
Phone: 412-383-6649
Fax: 412-383-6655
HIM: http://www.shrs.pitt.edu/him
SHRS: http://www.shrs.pitt.edu

TELEHEALTH USABILITY QUESTIONNAIRE (TUQ)

#	Statements	N/A	1 2 3 4 5 6 7
1.	Telehealth improves my access to healthcare services.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
2.	Telehealth saves me time traveling to a hospital or specialist clinic.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
3.	Telehealth provides for my healthcare need.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
4.	It was simple to use this system.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
5.	It was easy to learn to use the system.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
6.	I believe I could become productive quickly using this system	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
7.	The way I interact with this system is pleasant.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
8.	I like using the system.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
9.	The system is simple and easy to understand.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
10.	This system is able to do everything I would want it to be able to do.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
11.	I can easily talk to the clinician using the telehealth system.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
12.	I can hear the clinician clearly using the telehealth system.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
13.	I felt I was able to express myself effectively.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
14.	Using the telehealth system, I can see the clinician as well as if we met in person.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
15.	I think the visits provided over the telehealth system are the same as in-person visits.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE

[c] Telehealth Usability Questionnaire (TUQ) by Parmanto and colleagues is licensed under Creative Commons Attribution 4.0 International License (https://creativecommons.org/licenses/by/4.0/).

16.	Whenever I made a mistake using the system, I could recover easily and quickly.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
17.	The system gave error messages that clearly told me how to fix problems.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
18.	I feel comfortable communicating with the clinician using the telehealth system.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
19.	Telehealth is an acceptable way to receive healthcare services.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
20.	I would use telehealth services again.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE
21.	Overall, I am satisfied with this telehealth system.	☐	DISAGREE ☐ ☐ ☐ ☐ ☐ ☐ ☐ AGREE

In this questionnaire, 1 - strongly disagree, 2 – disagree, 3 – somewhat disagree, 4 – neither agree nor disagree, 5 – somewhat agree, 6 – agree, 7 – strongly agree

To determine the usability of the telehealth system, calculate the total and determine the average of the responses to all statements. The higher the overall average, the higher the usability of the telehealth system.

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APPENDIX F

Means for Variables Among Patients

Variable	Patient M(SD)			
Variable	Combined	Telehealth	In-person	Range
WAI Session 1				
Bonds	15.38 (4.06)	15.47 (3.00)	15.22 (5.63)	4-20
Tasks	14.38 (3.70)	13.93 (3.61)	15.11 (3.95)	4-20
Goals	15.08 (4.12)	15.33 (3.48)	14.67 (5.22)	4-20
Composite	44.83 (10.65)	44.73 (8.62)	45.00 (13.99)	12-60
WAI Session 3				
Bonds	17.21 (3.46)	16.29 (3.60)	19.80 (0.45)	4-20
Tasks	14.84 (3.15)	13.93 (3.17)	17.40 (0.89)	4-20
Goals	17.37 (2.97)	16.79 (3.14)	19.00 (1.73)	4-20
Composite	49.42 (8.87)	47.00 (9.14)	56.20 (2.05)	12-60
WAI Session 5				
Bonds	16.75 (4.12)	16.00 (4.43)	19.00 (2.00)	4-20
Tasks	15.82 (3.63)	15.31 (3.17)	17.500 (5.00)	4-20
Goals	16.50 (3.85)	16.00 (3.84)	18.00 (4.00)	4-20
Composite	48.81 (10.94)	46.92 (10.70)	54.50 (11.00)	12-60
OQ-45.2 Session 1				
Symptom Distress (SD)	46.70 (17.57)	49.59 (17.42)	41.89 (17.72)	0-100
Interpersonal Relations (IR)	18.26 (6.49)	18.55 (6.65)	17.78 (6.57)	0-44
Social Role (SR)	13.54 (5.63)	13.60 (5.45)	13.44 (6.25)	0-36
Total	78.54 (25.28)	81.80 (25.24)	73.11 (25.88)	0-180
OQ-45.2 Session 5				
Symptom Distress (SD)	46.82 (13.50)	48.69 (13.05)	40.75 (15.06)	0-100
Interpersonal Relations (IR)	17.71 (4.90)	19.00 (4.40)	13.50 (4.43)	0-44
Social Role (SR)	11.59 (5.17)	12.46 (5.35)	8.75 (3.77)	0-36
Total	76.11 (18.94)	80.16 (16.78)	63.00 (22.08)	0-180
TUQ Session 1				
Usefulness		6.13 (1.66)		1-7

Ease of Use	5.71 (1.62)	1-7
Effectiveness	5.72 (1.80)	1-7
Reliability	4.88 (1.81)	1-7
Satisfaction	5.93 (1.62)	1-7
Overall	5.71 (1.57)	1-7
TUQ Session 3		
Usefulness	6.48 (1.05)	1-7
Ease of Use	5.61 (1.54)	1-7
Effectiveness	5.77 (1.44)	1-7
Reliability	4.99 (1.87)	1-7
Satisfaction	6.30 (1.19)	1-7
Overall	5.82 (1.22)	1-7
TUQ Session 5		
Usefulness	5.53 (2.28)	1-7
Ease of Use	5.18 (2.02)	1-7
Effectiveness	5.40 (2.05)	1-7
Reliability	4.19 (2.10)	1-7
Satisfaction	5.83 (1.97)	1-7
Overall	5.28 (1.77)	1-7

Note. Higher scores on WAI indicate better alliance, higher scores on TUQ indicate better usability, higher scores on OQ-45.2 indicate more distress/difficulties.

APPENDIX G

Means for Variables Among Trainee Therapists

Variable	Patient M(SD)			
	Combined	Telehealth	In-person	Range
WAI Session 1				
Bonds	17.88 (1.62)	18.07 (1.75)	17.56 (1.42)	4-20
Tasks	14.42 (2.21)	14.93 (2.34)	13.56 (1.74)	4-20
Goals	13.42 (3.09)	13.53 (3.09)	13.22 (3.27)	4-20
Composite	45.71 (5.87)	46.53 (6.41)	44.33 (4.87)	12-60
WAI Session 3				
Bonds	18.39 (1.72)	18.46 (1.76)	18.20 (1.79)	4-20
Tasks	14.72 (2.70)	14.77 (3.09)	14.60 (1.52)	4-20
Goals	15.33 (2.77)	15.54 (3.02)	14.80 (2.17)	4-20
Composite	48.44 (6.60)	48.77 (7.40)	47.60 (4.39)	12-60
WAI Session 5				
Bonds	18.94 (1.12)	19.08 (1.08)	18.50 (1.29)	4-20
Tasks	15.25 (2.59)	14.92 (2.54)	16.25 (2.87)	4-20
Goals	15.56 (2.39)	15.75 (2.30)	15.00 (2.94)	4-20
Composite	49.75 (5.52)	49.75 (5.36)	49.75 (6.85)	12-60
TUQ Session 1				
Usefulness		6.43 (0.93)		1-7
Ease of Use		6.37 (0.75)		1-7
Effectiveness		5.89 (0.82)		1-7
Reliability		4.89 (0.96)		1-7
Satisfaction		6.60 (0.44)		1-7
Overall		6.15 (0.59)		1-7
TUQ Session 3				
Usefulness		6.56 (0.66)		1-7
Ease of Use		6.47 (0.71)		1-7
Effectiveness		5.78 (0.99)		1-7
Reliability		5.06 (1.41)		1-7
Satisfaction		6.60 (0.62)		1-7
Overall		6.20 (0.72)		1-7
TUQ Session 5				
Usefulness		6.56 (0.78)		1-7

Ease of Use	6.56 (0.61)	1-7
Effectiveness	6.07 (0.88)	1-7
Reliability	5.42 (1.02)	1-7
Satisfaction	6.73 (0.42)	1-7
Overall	6.35 (0.57)	1-7

Note. Higher scores on WAI indicate better alliance, higher scores on TUQ indicate better usability, higher scores on OQ-45.2 indicate more distress/difficulties.

APPENDIX H

In-Person Patient WAI Score by Case

Case	Bonds			Tasks			Goals			Composite		
	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5
16	20	20	16	16	17	10	13	16	12	49	53	38
17	16	20	20	16	18	20	16	20	20	48	58	60
18	20	19	20	20	18	20	20	19	20	60	56	60
19	20	20	20	20	18	20	20	20	20	60	58	60
20[c]	19	20		15	16		18	20		52	56	
21[b]	5			7			6			18		
22[c]	17			15			19			51		
23[c]	12			12			12			36		
24[b]	8			15			8			31		
Overall Mean	15.22	19.80	19.00	15.11	17.40	17.50	14.67	19.00	18.00	45.00	56.20	54.50

[a] Missing TUQ and Tasks, Goal, Overall WAI; Dyad completed 5 sessions. [b] Missing survey data due to interruption in services and/or early termination. [c] Missing survey data due to transition to hybrid. [d] Missing survey data due to unknown reason.

APPENDIX I

Telehealth Patient WAI Score by Case

Case	Bonds			Tasks			Goals			Composite		
	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5
1	10	7	6	12	10	12	10	11	10	32	28	28
2	14	14	19	17	16	13	17	16	16	48	46	48
3	20	20	20	20	19	19	20	20	20	60	59	59
4	15	13	17	9	12	16	13	13	17	37	38	50
5[a]	18	19		16	16	20	16	18		50	53	
6	15	19	19	14	18	17	18	20	20	47	57	56
7	16	17	12	14	13	12	19	19	12	49	49	36
8	12	16	14	17	14	14	11	16	14	40	46	42
9	15	14	19	7	9	14	11	12	19	33	35	52
10	16	16	12	11	12	12	16	15	12	43	43	36
11	20	20	20	16	14	18	19	20	20	55	54	58
12[b]	12			13			12			37		
13	17	18	14	15	18	12	13	19	12	45	55	38
14[d]	13	15		10	10		15	16		38	41	
15[d]	19	20	20	18	14	20	20	20	20	57	54	60
Overall Mean	15.47	16.29	16.00	13.93	13.93	15.31	15.33	16.79	16.00	44.73	47.00	46.92

[a] Missing TUQ and Tasks, Goal, Overall WAI; Dyad completed 5 sessions. [b] Missing survey data due to interruption in services and/or early termination. [c] Missing survey data due to transition to hybrid. [d] Missing survey data due to unknown reason.

APPENDIX J

In-person Trainee Therapist WAI Score by Case

Case	Bonds			Tasks			Goals			Composite		
	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5
16	19	20	17	15	15	12	16	16	11	50	51	40
17	17	17	18	17	15	17	17	16	15	51	48	50
18	16	16	19	14	15	18	15	15	18	45	46	55
19	17	20	20	13	16	18	15	16	16	45	52	54
20[c]	18	18		12	12		8	11		38	41	
21[b]	15			13			10			38		
22[c]	19			11			10			40		
23[c]	19			13			12			44		
24[b]	18			14			16			48		
Overall Mean	17.56	18.20	18.50	13.56	14.60	16.25	13.22	14.80	15.00	44.33	47.60	49.75

[a] Missing TUQ and Tasks, Goal, Overall WAI; Dyad completed 5 sessions. [b] Missing survey data due to interruption in services and/or early termination. [c] Missing survey data due to transition to hybrid. [d] Missing survey data due to unknown reason.

APPENDIX K

Telehealth Trainee Therapist WAI Score by Case

Case	Bonds			Tasks			Goals			Composite		
	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5	Session 1	Session 3	Session 5
1	16	14	18	9	6	8	8	9	11	33	29	37
2	19	18	19	15	17	17	12	16	16	46	51	52
3	19	19	19	17	18	16	15	18	16	51	55	51
4	19	18	20	14	15	16	15	18	18	48	51	54
5[a]	19	20	20	16	16	16	10	16	18	45	52	54
6	18	19	20	17	15	16	17	17	16	52	51	52
7	19	20	18	15	16	13	16	16	16	50	52	47
8	19	20	20	14	16	17	15	19	19	48	55	56
9	15	16	17	12	13	14	10	12	15	37	41	46
10	19	18	18	15	12	14	14	11	12	48	41	44
11	20	19	20	17	16	17	14	16	16	51	51	53
12[b]	14			13			10			37		
13	17	20	20	15	17	15	12	16	16	44	53	51
14[d]	19			18			16			53		
15[d]	19	19		17	15		19	18		55	52	
Overall Mean	18.07	18.46	19.08	14.93	14.77	14.92	13.53	15.54	15.75	46.53	48.77	49.75

[a] Missing TUQ and Tasks, Goal, Overall WAI; Dyad completed 5 sessions. [b] Missing survey data due to interruption in services and/or early termination. [c] Missing survey data due to transition to hybrid. [d] Missing survey data due to unknown reason.