Impact of Exchanges and Client–Therapist Alliance in Online-Text Psychotherapy

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Abstract

The impact of exchanges and client–therapist alliance of online therapy text exchanges were compared to previously published results in face-to-face therapy, and the moderating effects of four participant factors found significant in previously published face-to-face studies were investigated using statistical mixed-effect modeling analytic techniques. Therapists (N=30) and clients (N=30) engaged in online therapy were recruited from private practitioner sites, e-clinics, online counseling centers, and mental-health-related discussion boards. In a naturalistic design, they each visited an online site weekly and completed the standard impact and alliance questionnaires for at least 6 weeks. Results indicated that the impact of exchanges and client–therapist alliance in text therapy was similar to, but in some respects more positive than, previous evaluations of face-to-face therapy. The significance of participant factors previously found to influence impact and alliance in face-to-face therapy (client symptom severity, social support, therapist theoretical orientation, and therapist experience) was not replicated, except that therapists with the more symptomatic clients rated their text exchanges as less smooth and comfortable. Although its small size and naturalistic design impose limitations on sensitivity and generalizability, this study provides some insights into treatment impact and the alliance in online therapy.

Introduction

Currently, the most common modality for online therapy is text-based e-mail.1 E-mail is asynchronous, meaning that participants typically respond to one another when they have time, whereas they respond immediately in synchronous text chat. Online text therapy would be expected to be less stimulus-rich than conventional face-to-face therapy (i.e., to lack the nonverbal cues), but it need not lead to a lesser quality interaction.2 Anecdotal reports have suggested that clients and therapists perceive text therapy similar to traditional therapy. For example, Fenichel and his colleagues3 after reading an unedited transcript of a text chat session, remarked on the “similarity between a text-based transcript and a comparable office session,” noting “the expressiveness and depth of the text-based communication.”

This study addressed the need to examine processes in online therapy,4 focusing on session impact and alliance in two text-based modalities: e-mail and text chat. Session impact encompasses participants’ evaluations of their session and postsession affective state.5,6 The alliance is widely regarded as a vehicle for conveying therapy’s active ingredients and perhaps a key active ingredient itself.7,8

Among the few differences previously observed in the evaluations of online and face-to-face therapy, online clients experienced their session as less Arousing when compared to their face-to-face counterparts. Reynolds and Stiles9 found that face-to-face therapists who used an online form reported their present mood as less Aroused than those in previous studies who used paper-and-pencil forms, suggesting that form-completion factors may contribute to the effect. Online clients have reported higher alliance in some studies10 and lower alliance in other studies11 when compared to their face-to-face clients.

Research Questions and Design

This study had two foci. First, if text therapy delivered online is to be effective, then clients and therapists should perceive impacts and alliances similarly to their face-to-face counterparts. As one exception, we expected to find lower postsession Arousal among online therapy participants, reflecting their experiencing the online environment as more comfortable and less threatening than the face-to-face milieu.9,12 Preliminary analyses based on a partial sample was consistent with these expectations.13 To assess

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these expectations, we compared the impact of the exchanges and the participants’ alliance. We also extended previous descriptive investigations, which have used cross-sectional designs, by examining online processes longitudinally.

Second, if online therapy is comparable, then online clients and therapists should be moderated by participant factors in similar ways to face-to-face therapy. Our search of the face-to-face therapy literature identified four participant factors (personal or contextual characteristics) that could potentially influence text therapists’ and text clients’ impact and alliance ratings: therapists’ theoretical orientation, therapists’ experience, clients’ symptom severity, and clients’ social support. Based on these reports, we expected that therapists of more symptomatic clients would report lower Smoothness during their exchanges; more-experienced therapist would report higher Partnership; less-experienced therapists would evaluate their exchanges as Deeper; and clients with more social support would report higher overall alliance ratings.

### Method

#### Participants

Participants were 30 therapists and 30 clients engaged in online therapy. Therapists each saw either 1 or 2 clients (mode = 1 client) for a total of 394 therapist-rated weeks of exchanges. Clients (N = 30) contributed a total of 475 client-rated weeks of exchanges. A subset of participants included both members of the therapeutic dyad: 10 online therapists and 13 clients; the other 20 therapists and 17 clients participated alone.

The therapists were women (70 percent), Caucasian (90 percent), aged 28–62 years (Mdn = 48), and 67 percent were married/partnered. They used either e-mail (n = 17 therapists) or text chat (n = 10 therapists), were predominately licensed in the United States (n = 20 therapists), and a plurality worked from a cognitive/behavioral perspective (33 percent).

The 30 clients’ ages ranged from 19 to 55 (Mdn = 43) with 83 percent women, 73 percent Caucasian, and 40 percent married/partnered. Their most common self-reported presenting problems were depression (12 clients) and anxiety (5). Of the six clients reporting more than one presenting problem, five endorsed depression and some other psychological issue.

#### Measures

**Demographic questionnaire.** The demographic questionnaire requested information on the respondent’s e-mail address, date of birth, marital status, gender, ethnicity, highest year of education, and either client's presenting problem or therapist’s full name, geographical location licensed to practice face-to-face psychotherapy, and theoretical orientation.

**Session Evaluation Questionnaire (SEQ).** The SEQ (Form 52), which assesses session impact, consists of 21 seven-point bipolar adjective items with the first 11 session evaluation items (five Depth subscale items and five Smoothness subscale items) and the second 10 postsession mood items (five Positivity subscale items and five Arousal subscale items).

Agniew relationship measure (ARM-12). The ARM-12, which assesses alliance, is a 12-item short form of the 28-item ARM. It includes four subscales: Bond, Partnership, Confidence, and Openness.

**The social support questionnaire.** The social support questionnaire (SSQ) version was a 12-item short form of the 27-item SSQ that includes two factor analytically derived subscales: Availability (SSQN) and Satisfaction (SSQS).

**The Global Assessment Scale (GAS).** The GAS was used by therapists to evaluate their clients’ overall level of functioning with a clinical description that includes the level of occupational and social functioning, as well as subjective distress.

#### Procedure

Participants were recruited online from private practitioner sites, e-clinics, online counseling centers, and mental-health-related discussion boards. Interested therapists had the option to invite current clients to take part. However, either the therapists or the clients could participate alone. Data collection ended when participants visited enough times to provide the minimum of 6 weeks each of session impact and alliance data. Clients completed many fewer forms compared to their therapists, with one-half (n = 28) of the total dyads (n = 59 with client reporting alone, therapist reporting alone, or both client and therapist reporting) represented by only the therapist reporting.

On their initial visit to the study’s online site, participants completed a consent form and the demographic forms. They could then choose to enter their weekly data immediately or logout to complete their ratings later.

A weekly reminder e-mail encouraging completion of the questionnaires as soon as possible was sent to participants who had yet to finish the forms for the previous week. When they logged in, participants were presented with links for the prior 2 weeks. For a completed week, participants entered either the number of weekly text-chat exchanges or the number of e-mails that they sent and received and completed the ARM and SEQ. Upon study completion, the therapists replied to an e-mail, requesting evaluations of their clients’ symptom severity (GAS), and the clients replied to an e-mail requesting their occupation and social support (SSQ).

#### Data analysis strategy

To assess the similarity of online process with face-to-face process, we compared the distributions of online therapy scale scores with distributions of face-to-face therapy values obtained in previously published studies. This comparison represents an aggregate benchmarking strategy used previously in psychotherapy outcome studies. At its simplest, benchmarking refers to “the establishment of reference points that can be used to interpret data” being mindful of comparing similar sets of information.

To assess the influence of the participant factors, we employed linear mixed-modeling analytic techniques. Following Littell et al., the general form of this model for therapist and client responses is shown in Table 1. The use of a mixed-effect modeling strategy has the advantages of accommodating correlation of multiple measurements,
Therapist

\[ Y_{jt} = (b_1 + b_2) + x_j \text{ECLECTIC} + \gamma_j \text{COGNITIVE} + \alpha_j \text{SYMPTOM SEVERITY} + \beta_j \text{F2F EXPERIENCE} + x_9 \text{ONLINE EXPERIENCE} + \]
\[ t \text{time of therapeutic exchange (measured as days since start of therapy); ECLECTIC=1 if therapeutic orientation is eclectic/integrative and 0 otherwise; COGNITIVE=1 if therapeutic orientation is cognitive/behavioral and 0 otherwise; SYMPTOM SEVERITY=therapist-rated client symptom severity (1 to 100); F2F EXPERIENCE=therapist face-to-face therapy experience (years); ONLINE EXPERIENCE=therapist online therapy experience (years); and SOCIAL SUPPORT=client social support (0 to 9).} \]

Client

\[ Y_{jt} = (b_2 + b_3) + \gamma_j \text{SOCIAL SUPPORT} + (b_3 + b_4) \times t + \gamma_j \text{SOCIAL SUPPORT} \times t + \epsilon_{jt} \]

Random effects analyses showed client effects on most of the clients' estimated SEQ and ARM intercepts, indicating significant variation among clients' self-reports on these qualities similarly to each other.

Sources of variation in participants' intercepts and slopes were estimated using random effects that are conceptually related to variance components. These random effects provide an index of the amount of variation attributable to (a) differences among therapists, (b) differences among clients of each therapist, and (c) remaining variation.

Random effects analyses (Table 3) showed a client effect on therapists' estimated SEQ and ARM intercepts, indicating that therapists saw systematic differences among their clients with respect to these process qualities. For therapists' SEQ and ARM subscales examined at the client-within-therapist level, estimated intercepts ranged from 0.0784 (p < 0.01; Arousal) to 0.5376 (p < 0.033; Smoothness) and accounted for a significant 14.01 percent to 45.50 percent of therapists' total rating variation on SEQ and ARM subscales (see Table 3).

In contrast, random effects analyses determined that therapists' estimated SEQ and ARM intercepts did not evidence a therapist effect. That is, therapists judged their own levels of these qualities similarly to each other.

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subscales. For clients’ SEQ and ARM subscales examined at the client-within-therapist level, estimated intercepts ranged from 0.0764 (p = 0.20, Bond/Partnership) to 1.1667 (p = 0.02; Openness) and accounted for a substantial 7.43 percent to 52.74 percent of the clients’ total rating variation for a given SEQ or ARM subscale (see Table 3).

In contrast, random effects analyses failed to show therapist effects on most of the client-estimated SEQ and ARM intercepts.

According to the random effects analysis, none of the therapists’ SEQ and ARM slopes for their clients evidenced a significant client effect. Further, random effects analyses determined that most of the therapists’ SEQ and ARM slopes did not evidence a significant therapist effect. Similarly, there was no evidence of significant client slopes for either SEQ or ARM. Few of the clients’ SEQ and ARM subscale slopes evidenced a therapist effect.

Participant factors influencing therapists’ ratings

We used fixed effects analyses to examine whether therapists’ average ratings of the qualities of their online text exchanges and their therapeutic relationship with their clients were influenced by four participant factors.

Client symptom severity. Therapists with more symptomatic clients experienced their text exchanges as slightly, but significantly, less Smooth and Positive, estimated \( \beta = 0.04 \) (t[387] = 3.03, p < 0.01) and estimated \( \beta = 0.02 \) (t[387] = 2.23, p < 0.05), respectively, and their relationship as having slightly, but significantly, less Bond/Partnership, estimated \( \beta = 0.02 \) (t[387] = 2.45, p < 0.05).

Therapist theoretical orientation. Cognitive/Behavioral therapists (as opposed to “other” therapists) perceived their clients as having significantly more Confidence, estimated \( \beta = 0.69 \) (t[387] = 3.03, p < 0.01).
based exchanges with their therapists as more comfortable and less distressing than did clients with less-perceived social supports (i.e., significantly more Smooth), $r = 0.2876$ ($t_{[472]} = 2.28, p < 0.05$).

**Discussion**

Online clients and therapists rated their session impacts and alliances as equally strong or stronger than had previously clients in face-to-face therapy (see Table 2). We hasten to acknowledge that these comparisons were not based on random assignment, and there were many potentially confounding differences.

The previously observed online calming effect, manifested in the substantially lower Arousal ratings of online therapists and clients relative to their face-to-face counterparts, was replicated. First, therapists’ Arousal responses were numerically lower, and clients’ Arousal responses were in the lower range of previously published face-to-face study means (see Table 2). Second, therapists’ estimated population-level Arousal intercepts were low, and clients’ estimated population-level Arousal intercepts were especially low (see Table 3). Third, therapists’ population-level Arousal slopes were negative, indicating that their Arousal tended to decrease across sessions. Nevertheless, given the low reliability of the Arousal subscale, readers are advised to consider the online calming hypothesis as very tentative.

Our study also replicated the widely reported finding that therapists who worked with less-symptomatic clients rated their respective online therapeutic exchanges as Smoother than did therapists who worked with more-symptomatic clients. With these findings in mind, we consider several possible explanations consistent with the emerging empirical literature.

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**Table 3. Random Effects on Therapist- and Client-Estimated Intercepts for Session Impact (SEQ) and Therapeutic Alliance (ARM-12) Evaluations of Their Text Exchanges (Fitted Linear-Mixed Model)**

<table>
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* $p \leq 0.10$. ** $p \leq 0.05$. *** $p \leq 0.01$. 

$N = 394$ weeks of exchanges for therapists. $N = 475$ weeks of exchanges for clients.
Online calming hypothesis

The online calming hypothesis proposes that therapists and clients experience the online environment as more comfortable and less threatening than the face-to-face milieu.

An alternative explanation of online participants’ lower Arousal ratings is the longer delay of reporting. Most of the previous face-to-face participants completed the SEQ immediately after their sessions (e.g., Stiles and Snow and Cummings et al., whereas most of our participants completed the measures much later. Conceivably, the activating influence of online participants’ therapeutic encounter may have decreased with the greater time from their online exchanges. Consequently, participants who completed the forms later may have under-reported their postsession degree of Arousal. However, this possibility seems less likely, given that our mean comparisons between forms completed early and late provided no evidence that reporting delay influenced comparisons between our online study and previous face-to-face therapy studies.

Some of our clients anonymously stated that they were able to tolerate online therapy better than face-to-face therapy consistent with the interpretation that clients’ experience a calming influence of the online environment. Cohen and Kerr’s face-to-face clients completed paper-and-pencil measures and rated their mood “right now” as more Aroused than their online clients. Consequently, the lack of exposure to the online environment during either their therapy sessions or subsequent reporting may have accounted for their increased Arousal ratings. Similarly, the hypothesis accounts for Reynolds and Stiles finding that face-to-face therapists who reported online within 2 hours of their sessions rated their mood “right now” as less Aroused than did face-to-face therapists who reported online more than 2 hours after their sessions. The exposure to the online environment during subsequent reporting may have accounted for their decreased Arousal ratings.

We suggest that online therapists could take advantage of the online calming effect by addressing client problems that are relatively accessible with lower emotional arousal. If online therapy is experienced as more comfortable, it may offer a less threatening alternative to face-to-face psychotherapy, especially for those who wrestle with anxiety disorders such as social anxiety disorder.

Client social support and psychopathology

Therapists with relatively lower Smoothness and Positivity ratings worked with relatively more symptomatic clients. They may have experienced their online exchanges as more challenging, tense, and uncomfortable as a result of the difficulty in emotionally connecting and working together with their more symptomatic clients (e.g., Zuroff et al.). This finding is consistent with Jones and Markos finding that a higher client presession distress was related to lower ratings of session Smoothness.

Further, clients who reported higher perceived social support rated their online therapeutic exchanges as more Smooth. Clients’ increased social competencies may have been responsible for both cultivating the increased social support in their life and the more relaxed, pleasant, and comfortable exchanges with their therapists. Clients who perceive their exchanges as Smoother may be more likely to continue in therapy and thus resolve their presenting complaints (cf. Samstag et al.). Our findings failed to replicate previous findings that clients with more perceived social support reported higher therapeutic alliance ratings. This finding seems inconsistent with our premise that clients with more social support had increased social competencies in their interactions with others. However, clients with more social support may have less-severe presenting problems that reduced their need to cultivate stronger relationships with their therapists. Unfortunately, limited statistical power precluded our ability to examine this interesting potential interaction effect.

Limitations and practice implications

The findings of this study are tentative given the limited number of participants, their narrow demographics, the limited number of therapist orientations represented, and the restricted presenting problem range of the clients. Further, we cannot rule out possible self-selection biases, because our participants volunteered to take part in this study. However, our results offer qualified encouragement for future therapists and clients who are considering using online therapy. Online therapy may not be a less-desirable alternative to face-to-face therapy, but holds promise as a legitimate manner of conducting psychotherapy.

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Author Disclosure Statement

All authors assert that no competing financial interests exist.

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References marked with an asterisk indicate studies included in the comparison analysis.


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