

A Study of Asynchronous Mobile-Enabled SMS Text Psychotherapy

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Abstract

Background: Many obstacles to obtaining psychotherapy continue to diminish its reach despite its documented positive effects. Using short message service (SMS) texting and Web platforms to enable licensed psychotherapists to deliver therapy directly to the lived context of the client is one possible solution. **Introduction:** Employing a feasibility study design, this pilot trial further evaluated the external validity for treatment outcomes of text therapy and extended findings to include mobile-enabled text platforms. **Materials and Methods:** Adults seeking text therapy treatment for a variety of disorders were recruited from a text therapy service (N = 57). Clinical outcomes were measured using the General Health Questionnaire-12 (GHQ-12) through 15 weeks of treatment. A process variable, the therapeutic alliance, was measured with the Working Alliance Inventory. Treatment acceptability was assessed with ratings of satisfaction for several aspects of the treatment, including affordability, effectiveness, convenience, wait times to receiving treatment, and cost-effectiveness. **Results:** Results indicate evidence for the effectiveness of the intervention (GHQ-12, Cohen's $d = 1.3$). Twenty-five (46%) participants experienced clinically significant symptom remission. Therapeutic alliance scores were lower than those found in traditional treatment settings, but still predicted symptom improvement ($R^2 = 0.299$). High levels of satisfaction with text therapy were reported on dimensions of affordability, convenience, and effectiveness. Cost-effectiveness analyses suggest that text therapy is 42.2% the cost of traditional services and offers much reduced wait times. **Conclusion:** Mobile-enabled asynchronous text therapy with a licensed therapist is an acceptable and clinically beneficial medium for individuals with various diagnoses and histories of psychological distress.

Keywords: psychotherapy, SMS text, text therapy, mobile health, feasibility research design

Introduction

It has long been known that psychotherapy is consistently effective for treating psychological and emotional disturbances.¹⁻³ Indeed, the effect sizes for psychological treatment are sufficiently large to be comparable to the reduction in suffering offered by common medical treatments in cardiology, geriatrics, vaccination virology, and ophthalmology.⁴ Despite the successes of psychotherapy, there are a number of significant barriers to getting access to treatment. These include fear of stigma, a lack of time to receive treatment, prohibitive costs, and various systemic and geographical issues such as lack of access to adequate care. These obstacles tend to reduce seeking and obtaining treatment, which then perpetuate the economic and social costs of untreated illness.⁵

This is especially unfortunate as psychology is unique in comparison with other forms of medicine, given the potential of modern information and communication technologies to deliver psychosocial treatments *directly* to individuals struggling with psychological health problems, and thereby overcome many of the common barriers to treatment.^{6,7} The potential of technology-assisted treatment continues to be demonstrated in ongoing research, in which psychotherapy has effectively treated a wide range of disorders while using a variety of information technology platforms.⁸⁻¹²

Of the communication technologies available, short message service (SMS) text is a particularly promising mode. The therapeutic capabilities of SMS texting have been understudied despite the nearly universal popularity of the medium.¹³ Although this mode only enables communication by way of text, certain writing exercises, regardless of the medium, have been shown to be effective in improving psychological and general well-being, as well as in enhancing cognitive processing ability.¹⁴ An additional draw of the medium is the ability of SMS text to produce real dialogue between the therapist and the client in places and at times that are convenient for both. This can lead to less frequent visits, provide a focus on the recovery model of mental health through greater treatment options that facilitate ongoing intervention,^{15,16} and increase the reach of evidence-based practice.¹⁰ Nevertheless, early investigations of the medium tend to employ it in a preprogrammed manner

focused on providing reminders during stages of maintenance and aftercare.

For instance, Montes, Medina, Gomez-Beneyto, and Maurino¹⁷ used daily SMS text message reminders to enhance antipsychotic medication adherence among clinically stabilized outpatients with a diagnosis of schizophrenia, reporting not just an increase in medication adherence for their 254 participant sample but also decrease in negative, cognitive, and global clinical symptoms. Silva et al.¹⁸ used SMS texting to gather daily self-reports on the health behaviors of children to return supportive feedback and found successful outcomes of such a program compared with a control group with no messages. In another study, Bauer et al.¹⁹ collected three variables of interest once a week from individuals recently treated for eating disorders for 3 months using an SMS texting platform. This program returned feedback messages tailored according to the symptoms being reported. They reported an increase in remission rates, especially among those who did not make use of outpatient treatment options, over and above a control group who received treatment as usual. Finally, Granholm et al.²⁰ used an SMS text-based program called Mobile Assessment and Treatment for Schizophrenia (MATS) to help produce significant improvement across three different domains, including an increase in medication adherence, a reduction in auditory hallucinations, and a greater ability to engage in social interactions. Participants engaged in 3 text message interactions 6 days per week for 12 weeks. MATS made greater use of SMS text messages throughout the course of treatment than did the others reviewed here and relied on automated messages rather than messages with a therapist.

Technology platforms that offer text-mediated treatment between a live therapist and patients tend not to use SMS texting. For instance, in a study conducted by Wagner et al.,²¹ participants with depression were randomized to either face-to-face therapy or to receive an online therapy program, in which all therapeutic communication took place through e-mail. Participants in both groups experienced significant improvements post-treatment and at the 3-month follow-up; however, the online group tended to maintain their improvement more effectively than the face-to-face group. In another randomized control trial (RCT), participants suffering from clinical depression received therapy through an online messaging platform from a licensed therapist in real time and were compared with a group receiving standard care from their general practitioner. Symptom change was assessed post-treatment at 4 months and at an 8-month follow-up. The online group showed greater recovery rates from depression post-treatment and greater maintenance of recovery at 8 months than the control group.²²

Our aim was to investigate an intervention that uses technology-driven text capabilities to enable licensed therapists to asynchronously deliver treatment to individuals suffering from a variety of disorders and life stresses. The messaging therapy platform provided by Talkspace (www.talkspace.com) was used, which offers a native mobile application that functions like the common SMS texting application found on all smartphones, except that it offers a more dedicated and secure platform for sending and receiving SMS text messages that is password protected. A desktop messaging application is also available with similar capabilities. We studied the impact that asynchronous texting through mobile and desktop devices had on treatment outcomes with a feasibility approach to the effectiveness of study design.² The study design, use of mobile texting, and asynchronous pattern of responses between therapist and patient extend the investigations to date on the impact of technology-assisted text therapy. We also investigated the extent to which individuals participating in the service were able to form the kind of alliance with their therapist known to be predictive of successful therapy.²³ Finally, we assessed general efficiency and cost-effectiveness metrics of the Talkspace service, as well as gauging satisfaction with the service as a whole.

Materials and Methods

PARTICIPANTS AND RECRUITMENT

We sent an online invitation by way of the therapist-client computer platform interface to individuals who were currently using the service and who had received treatment on the text therapy service for between 3 and 4 months (a total of 152 potential responders). In keeping with the goal of collecting data from individuals whose characteristics would match those for whom the service was intended, the only exclusion criterion was that participants not have diagnoses of psychosis-related disorders. Eighty-two individuals responded to the invitation and 57 completed all of the questionnaires, a 54% response rate and a 70% completion rate, both of which fall in the average range reported elsewhere.^{24,25} The following data analyses include the final 57 as the subject pool. The excluded participants failed to supply responses to more than a handful of the items or were found to be duplicates, and were thus unusable for analysis. It was ensured that each respondent had been using the service for at least 3 months and no more than 4 months by verifying an anonymous username provided by the respondent. This was done to confirm that each response was from someone using the service, and that they fit within a timeframe that matched the 12–16-week treatment duration commonly used in randomized, controlled therapy research. The actual sample

average was 3.86 months of using the service. Given the requirements of using the service, participants were at least 18 years of age, able to read English, able to access the Internet regularly, and had proficiency in using mobile and desktop technologies. Most ($N=38$, 67%) of the participants were female, and all participants were between the ages of 18 and 60 years ($M=34.1$, $SD=10.3$). Participants were treated by licensed psychotherapists, with each psychotherapist treating 1.6 study participants on average. Study psychotherapists had 8.3 years of experience ($SD=4.0$) and exhibited a mix of orientations with 13 (36%) primarily aligned with a cognitive-behavioral approach, 12 (33%) primarily aligned with a relational-dynamic approach, and 11 (30%) declaring an integrative or eclectic approach.

Participants were informed about the nature of the research and were instructed that clicking on the hyperlink provided in the invitation posted on the technology platform would signal their consent to participate in the research study. The hyperlink then directed participants to the online survey and questionnaires. The study was approved by the Teachers College, Columbia University Institutional Review Board.

OUTCOME MEASURE

The primary outcome measure used was the General Health Questionnaire-12 (GHQ-12), which is a well-validated and standard instrument with good psychometric properties that measures behaviors, functioning, and distress predictive of nonpsychotic psychiatric disorders^{26,27} ($\alpha=0.88$), and that has been found to predict more intensive measures of symptomatology such as the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders-IV-Test Revision.^{28,29} Respondents were asked to indicate how frequently they experienced losing sleep over worry, feeling unhappy, or feeling incapable of facing up to their problems using a 4-point scale from 0 ("better than usual" or "much more than usual") to 3 ("not at all" or "much less than usual"), with several items reverse coded. The 4-point Likert scale results in scores that range between 0 and 36, with higher scores indicating greater distress and mental health difficulty. The reliability of the measure was excellent for this sample ($\alpha=0.908$). The GHQ-12 was chosen as the primary outcome measure to capture the broad range of presentations and diagnosed disorders among the participants, which included depression, generalized anxiety disorder, social anxiety disorder, bipolar disorder, adjustment disorders, sex disorders, and personality disorders. Comorbidity among disorders was common for this sample ($n=18$; 32%).

Participants were asked to fill out a GHQ-12 for how they were doing retrospectively before starting text therapy. After

completing the retrospective GHQ-12, participants then completed the Working Alliance Inventory (WAI) described hereunder to provide space between the retrospective GHQ-12 and the post-test GHQ-12. All measures were self-reported and were completed by the participants in one sitting.

PROCESS MEASURE FOR THERAPEUTIC ALLIANCE

A wealth of research has documented the salubrious effect of a well-functioning therapeutic relationship on psychological health.³⁰ To measure the quality of the therapeutic relationship achieved through texting, we used the WAI ($\alpha=0.93$).³¹ This is a well-validated and frequently used measure that has also been shown to predict treatment outcome.³²

The WAI contains three subscales within it that emphasize different aspects of the relationship. The first is the Bond subscale, which measures the extent of the emotional and relational connection between the therapist and client. The second is the Task subscale, which measures the client's confidence in the tasks and work assigned by the therapist. The third is the Goal subscale, which measures the extent to which the therapist and the client agree on the goals of psychotherapy. These three subscales can then be summed into an overall score that reflects the total quality of the working alliance.

Respondents were asked to indicate the extent to which they agree with statements such as "I am clear on what my responsibilities are in therapy," "My relationship with my therapist is very important to me," and "We agree on what is important for me to work on," using a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). The reliability of this measure was excellent for this sample ($\alpha=0.854$).

SATISFACTION WITH TEXT THERAPY

The survey concluded by asking several questions about the types of psychological services the participants had used before text therapy, as well as the overall sense of how satisfied they were with the text therapy. Specific questions included how text therapy compared with previous services in terms of its affordability, convenience, and effectiveness, and how satisfying their experience has been.

COST-EFFECTIVENESS OF TEXT THERAPY

We looked at how much an individual would need to pay for services to achieve positive gains, controlling for similar effect sizes between traditional therapy and text therapy.

WAIT TIMES FOR TEXT THERAPY

Time to receive an initial consultation and time to receive a first therapy session were measured using the automated

transactional database that keeps track of client interactions with the site.

STATISTICAL ANALYSIS

In addressing the effectiveness of the intervention, retrospective pretest scores and post-test scores on the GHQ-12 were compared using a within-subjects paired-samples *t* test to gauge the overall effect of time while controlling for the correlation between reported values in computing the Cohen's *d* effect size. Three analyses of treatment outcome were run that (1) include and (2) exclude participants who reported receiving simultaneous treatment elsewhere, and that (3) include only the 48 participants (84%) who reported receiving traditional individual counseling before the intervention. These analyses are designed to determine whether treatment history is a confound in the overall effect of the treatment. Analyses of clinically significant change are reported in accordance with Jacobson and Truax,³³ and used the GHQ-12 Likert scoring method, which involves summing the values of the Likert responses to get a range of 0 to 36, a score of 12 or higher tends to be the most sensitive with around 85% of individuals reaching a diagnostic threshold for an Axis I disorder.³⁴

In secondary analyses, quality of the therapeutic relationship, impact of the relationship on outcome, satisfaction with text therapy, cost-effectiveness, and wait times were analyzed. In assessing the quality of the relationship, averages were computed for the three subscales of the WAI, as well as the overall scores. These are reported along with average WAI scores as reported previously in the literature for traditional therapy³² converted from their 7-point Likert scale to 5-point Likert scaling for correct comparisons with the version used in this study. A series of one-sample *t* tests were run to quantify differences between WAI variables for this sample in comparison with the scores reported in Busseri and Tyler,³² which were used to reflect the population means. WAI scores were then used to predict the degree of change reported by the participants, as done previously with traditional therapy.³² Lastly, WAI scores were regressed against the retrospective pretest to determine whether bond with the therapist biased retrospective reporting.

Satisfaction with text therapy was reflected in the cumulative percentages of participants reporting agreement with statements of satisfaction for several dimensions of treatment. In an effort to create a rough estimate of the cost-effectiveness of text therapy, an acceptable estimate of the costs of traditional individual psychotherapy is needed. As this information is not readily available, the estimate employed by Crane et al.³⁵ drawing on the reported claims for reimbursement

from a large health insurance provider was used. Currency reported is in U.S. Dollars (USD) and represents the USD value for 2004. These figures are updated to USD values for 2015 using the inflation calculator available from the Bureau of Labor Statistics. This results in an average cost of \$62.49 per session ($SD = \90.47) for individual face-to-face therapy. Weekly sessions were assumed by the analyses and were multiplied by the 3.86 months of text therapy reported by the respondents. We then compared that to the cost of text therapy through Talkspace for the same time period. Although the effect size for text therapy reported here was somewhat greater than that reported for traditional therapy on average (between 0.72 and 1.02^{1-3,36}), we provided a conservative estimate by assuming that the outcome effect sizes for text therapy and traditional therapy are similar (see also Kessler et al.²²), thus holding effectiveness as a constant.

Long wait times to receive psychological services are a major concern. They lead to client dissatisfaction and increased drop out. Those who drop out before the first appointment often fail to seek help elsewhere.³⁷ Unfortunately, it is exceedingly difficult to identify an average wait time for traditional therapy as so many different kinds of services have vastly different wait times, and because this area is so lacking in research. Nevertheless, mean wait times for the sample are reported and are gathered from usage data stored on the service provider's servers from the time the participants originally signed up for the service.

Results

EFFECTIVENESS OF TEXT THERAPY

Participants reported significantly less life distress after 3.86 months of text therapy ($M = 15.5$, $SD = 5.4$, $t(56) = 10.16$, $p < 0.0001$, 95% CI [6.69, 9.97], $d = 1.3$) than before they started ($M = 23.8$, $SD = 6.1$). When excluding the four participants who reported receiving treatment elsewhere, no noticeable change in the results was found (Post, $M = 15.2$, $SD = 5.2$; Retro, $M = 23.2$, $SD = 5.7$, $t(52) = 9.35$, $p < 0.0001$, 95% CI [6.32, 9.77], $d = 1.3$) and they were included in the remainder of the analyses. The GHQ-12 effect size for the 48 participants who received treatment before the treatment under study was slightly higher, but essentially the same as the full sample (Post, $M = 16.0$, $SD = 5.44$; Retro, $M = 23.3$, $SD = 6.0$, $t(47) = 9.50$, 95% CI [5.66, 8.88], $p < 0.0001$, $d = 1.4$).

CLINICALLY SIGNIFICANT CHANGE

Fifty-four participants (95%) reported a GHQ-12 score of 12 or higher before beginning the treatment. Twenty-five of the 54 participants (46%) reported a GHQ-12 score of less than 12

Table 1. Comparison of Working Alliance Inventory Scores Between Text Therapy and Traditional Therapy

Scale	WAI SCORES FOR TEXT THERAPY						TRADITIONAL THERAPY	
	n	M	SD	t	p	d	M	SD
Bond	55	4.07	0.56	-3.25	0.002	0.43	4.31	0.56
Goal	54	3.80	0.61	-4.93	<0.001	0.70	4.21	0.57
Task	57	4.01	0.73	-2.23	0.03	0.32	4.22	0.58
Total	53	3.96	0.59	-3.46	0.001	0.52	4.25	0.53

n indicates the number of subjects for whom we had data; *M*, the mean response; *SD*, the standard deviation of the responses; *t*, the *t* score; *p*, the *p* value for hypothesis testing; *d*, Cohen's *d* effect size for difference between text therapy and traditional therapy.

WAI, Working Alliance Inventory.

after treatment with an average change of 10.4 points (*SD*= 6.1, Min.= 2.0, Max.= 28.0). Another 20 participants (37%) experienced a change of 5 points or more without passing the clinical cutoff with an average change of 10.0 points (*SD*= 3.95, Min.= 5.0, Max.= 18). The remaining participants (*N*=9; 16%) reported very little to no change (*M*=0.56, *SD*= 1.89, Min.= -2.0, Max.= 3.0).

QUALITY OF THE THERAPEUTIC RELATIONSHIP

WAI scores for text therapy were statistically lower than those found in traditional in-person treatment as shown in *Table 1*; however, it is difficult to quantify the difference in real terms and thus to draw any conclusions about the meaning of these differences at present.

The total WAI score successfully predicted the amount of change in summed GHQ-12 Likert values ($R^2=0.299$, $F(1, 56)=23.5$, $p<0.0001$). WAI total score did not correlate

with retrospective pretest scores ($r(57)=0.187$, $p=0.165$, *ns*), nor did any of the WAI subscales.

SATISFACTION WITH TEXT THERAPY

The percentage of self-reported satisfaction for each of the dimensions of text therapy is provided in *Table 2*.

COST-EFFECTIVENESS OF TEXT THERAPY

The cost for 3.86 months of traditional therapy (roughly 15 sessions) is around \$937.35 (*SD*=\$1,357.05), whereas the cost for 3.86 months of Talkspace text therapy is \$386, 41.2% of the cost of traditional therapy assuming similar outcomes. As reflected in the standard deviation for the cost of traditional therapy, this estimate varies widely depending on several factors, including geography, the local economy, access to individual psychotherapy, the level of training of the therapist, one's health insurance coverage, the extent to

Table 2. Participant Ratings of Acceptability and Satisfaction of the Text Therapy Service

DIMENSION	MUCH WORSE (%)	SOMEWHAT WORSE (%)	ABOUT THE SAME (%)	SOMEWHAT BETTER (%)	MUCH BETTER (%)	CUMULATIVE, SAME OR BETTER (%)
Affordability	3.8	7.7	19.2	19.2	50	88.4
Convenience	0	0	1.9	11.5	86.5	100
Effectiveness	1.9	17.3	32.7	13.5	34.6	80.8
Right kind of help	1.9	9.6	34.6	19.2	34.6	89.4
Help right when needed	0	3.8	15.4	26.9	53.8	96.1
Making progress on my problem	0	7.7	34.6	26.9	30.8	92.3

Table indicates the percentage of participants reporting whether text therapy is *Much Worse*, *Somewhat Worse*, *About the Same*, *Somewhat Better*, or *Much Better* than the traditional therapy they have received in the past. *Cumulative, Same, or Better* is a sum of *About the Same*, *Somewhat Better*, and *Much Better* to give an overall sense of satisfaction for the treatment modality.

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which one has to pay out of pocket, and access to different treatment options.

WAIT TIMES FOR TEXT THERAPY

Server data indicated that 5.4 min ($SD=16.1$ min) elapsed between sign-up and contact from a consultation clinician. In 150 min ($SD=290$ min), individuals received their first message from a providing therapist.

Discussion

This study is the first feasibility study of its kind to investigate the outcomes of psychotherapy treatment delivered by licensed therapists through an SMS text and Web platform, and extends the efficacy study findings of Kessler et al.²² Preliminary findings for the effectiveness of asynchronous text therapy are promising. Strong, positive outcomes have been identified for this sample, and there is evidence for expected levels of working alliance between clients and their text therapists. The quality of the working alliance is also correlated with positive outcomes as predicted, given previous research on traditional psychotherapy. Forty-six percent of the sample reported clinically significant improvements, dropping below the threshold associated with Axis I diagnoses.³⁴ Another 37% of the sample reported improvements of 5 points or more on the GHQ-12.

Receiving treatment through SMS text and a message-based Web client was advantageous for participants along several dimensions important to accessing treatment, including cost-effectiveness, convenience, and getting help when it is needed, among others. The findings here are suggestive that text therapy may be a suitable alternative for certain individuals seeking psychotherapy services. Given common barriers to treatment⁵ and the increasing emphasis on recovery-oriented models of care,^{15,16} further research will be needed to understand the effects of this modality among different populations.

Important among these are the primary indicators for whom it would work well, how best to interface it with other forms of treatment such as medication and face-to-face treatment, as well as whether there are differing mechanisms of change in comparison with traditional treatment. Kessler et al.²² speculate that text therapy may enhance psychotherapy by encouraging reflection and metacognitive awareness through the careful writing and reviewing of what has been communicated. We also speculate that the effects of receiving therapeutic responses in one's lived context and at a temporal proximity to experienced problems help to create a virtual *in situ* intervention,³⁸ usually offered as the rationale for assigning homework in traditional therapies.^{39,40} Whether these

or other mechanisms are at play will need to be determined by thoughtful study designs.

As noted, this study uses the benefits of an effectiveness design, although in a preliminary form emphasizing feasibility of the design and of the intervention, which is an important companion to randomized, controlled efficacy studies.^{2,41} In particular, it benefitted from studying text therapy as actually practiced by licensed psychotherapists who self-correct treatment when a technique is not working and who specify no fixed duration of treatment at the outset. This treatment was received by patients who actively sought out the service, who are experiencing multiple problems and comorbidities, and who reported on improvements in their general functioning, rather than on the reduction of specific clusters of symptoms. It also used a questionnaire that provided detailed information regarding relational aspects of the therapeutic process, as well as a well-normed instrument that is sensitive to global behavioral information usable for determining clinically significant change in addition to continuous improvements in well-being. These are acknowledged strengths of such a design.

However, there are several limitations to this study. First, there is often a concern of sampling bias in outcomes research. Namely, it is difficult to gather data from individuals who drop out of treatment early or fail to continue for some reason, and as with research on traditional psychotherapy, this was also the case here, especially given the retrospective pretest. There are logistical and psychometric advantages to using a retrospective measure as a pretest. Primary among them is that people struggle to accurately self-report on their health until they experience what it is like to be feeling better.⁴² As a result, nonretrospective pretests are not necessarily superior to those that are retrospective for a study that asks the kinds of questions posed to participants here. Although retrospective pretests have their advantages, one disadvantage is an inability to capture relevant demographic and condition severity data before treatment begins. However, text therapy provides a written record of exchanges between the therapist and client, which may contain clues as to the differences between those who drop out and those who do not above and beyond what can be gleaned from the standard pretests of those who fail to complete in an RCT. Such research is currently underway in the next stage of the study on this treatment medium. Longitudinal surveys have been implemented that seamlessly integrate with the service so that clients are able to establish a baseline before treatment begins and then track their progress each month as treatment continues.

Seligman² has also argued for the use of a longitudinal survey design, as well as blind third party diagnostic workups

to supplement self-report measures, and these are both weaknesses of the study as well. Although ongoing research on the psychometric properties of retrospective surveys has tended to support their validity,⁴² it would still be beneficial for future research to employ a longitudinal design composed of self-report and blind third party assessments to continue to extend the literature on text therapy. Lastly, randomized assignment to treatment as usual versus text therapy treatment with multiple assessments and a follow-up would help to increase the internal validity of the research on asynchronous text therapy. The one RCT on text therapy to date investigated the outcomes for synchronous text therapy (e.g., Kessler et al.²²), a very closely related, but subtly distinct approach from that discussed here. Although effectiveness studies privilege the external validity of reported outcomes, an efficacy study would help to strengthen the internal validity for outcomes of this particular treatment medium, and such a study is currently in preparation.

To conclude, preliminary investigation of asynchronous, mobile-enabled text therapy using a feasibility design demonstrated preliminary support for the treatment medium. Therapeutic alliance process variables were related to positive outcomes as predicted, and participants found the service to be very agreeable, affordable, convenient, and beneficial. Reduced wait times and a greatly expanded reach of psychotherapy as offered by licensed practitioners are clear benefits of the approach. This study is an important first step in assessing the utility and effectiveness of text-based therapy. Although further research is needed on this new approach in delivering psychotherapy, the findings suggest implications for how care providers can overcome long-standing logistic and financial barriers to receiving effective psychotherapy interventions.

Disclosure Statement

The sponsor (Talkspace) of the study had no role in data collection, data analysis, interpretation of the data, or writing of the results. The second author (K.M.) is an employee of the sponsor but only helped in the design of the study, in drafting the introduction, and in supplying information regarding the age, gender, and diagnoses of the participants. The corresponding author alone had access to the data and had final responsibility for the decision to submit for publication.

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