

Patient Acceptance of and Initiation and Engagement in Telepsychotherapy in Primary Care

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Objective: The study examined factors associated with the utilization of psychotherapy offered in primary care via videoconferencing (telepsychotherapy). **Methods:** Primary care patients with depression (N=179) recruited from five Federally Qualified Health Centers were randomly assigned to telemedicine-based collaborative care and offered free telepsychotherapy. Independent variables included measures of access to and need for treatment. Logistic regression identified variables associated with acceptability of and initiation and engagement in telepsychotherapy. **Results:** To 76% of patients the idea of participating in psychotherapy was acceptable. Thirty-eight percent scheduled a telepsychotherapy session, 17% attended a session, and 8% engaged in treatment (attended at least eight sessions). Because the intervention was designed to

minimize barriers, access was not a significant predictor of utilization. However, use of telepsychotherapy was associated with measures of perceived need. **Conclusions:** Even when psychotherapy was delivered in a primary care setting via videoconferencing to minimize barriers, few patients initiated or engaged in telepsychotherapy. (*Psychiatric Services* 64:380–384, 2013; doi: 10.1176/appi.ps.201200198)

Most primary care patients with depression prefer psychotherapy over psychotropic medications (1,2). However, the proportion of patients who receive psychotherapy instead of medication has declined, and most depressed patients in primary care receive either pharmacotherapy or no treatment at all (3), suggesting that patients may have poor access to their preferred treatment. Attempts to improve access to psychotherapy have not resulted in dramatic improvements in session attendance or treatment retention (4).

Because both actual and perceived access to care can have an impact on service use, improving access should improve utilization of psychotherapy (5). Actual access represents directly observable and objectively measurable dimensions (for example, travel distance), whereas perceived access represents self-reported and subjective dimensions (for example, perceptions of travel burden) (5). Dimensions of access are geographic, temporal,

financial, cultural, and digital (for example, connectivity to e-mail and the Internet and computer literacy). Perceived need for treatment also has an impact on service use. Measures of perceived need include perceptions about symptom burden, susceptibility (likelihood that symptoms will go away by themselves), stoicism, and treatment efficacy (5).

Collaborative care is designed to increase access to depression treatment by colocating specialty mental health services in primary care settings, thereby decreasing cultural (for example, stigma) and geographic (for example, transportation) barriers to care (6). Telemedicine-based collaborative care includes the delivery of “telepsychotherapy”—that is, the provision of therapy via videoconferencing from a specialist at an offsite location to a patient at another location, such as a primary care setting. Telepsychotherapy yields equivalent outcomes as face-to-face treatment (7,8) and consistently receives high ratings of satisfaction from patients and providers (8).

Because telemedicine-based collaborative care improves access to psychotherapy, we examined rates of telepsychotherapy acceptability, initiation, and engagement for primary care patients randomly assigned to this intervention in a clinical trial. We also examined whether measures of access and need were associated with the use of telepsychotherapy.

Methods

Participants were recruited between November 2007 and June 2009 in five

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Federally Qualified Health Centers (FQHCs) in Arkansas that did not employ mental health specialists. FQHC staff conducted screening and eligibility procedures. Over 20 months, a total of 19,285 patients were screened with the Patient Health Questionnaire (PHQ-9), a nine-item measure of depression symptoms (9). Fourteen percent ($N=2,863$) screened positive (PHQ-9 score ≥ 10). Of those who screened positive, 829 (29%) were assessed for eligibility. Of those providing consent, 55% ($N=364$) were eligible. Patients, stratified by clinic, were randomly assigned to telemedicine-based collaborative care or an active control group by using a 2×2 Latin square design. The methods have been described in detail elsewhere (10). The study sample included only patients who were randomly assigned to telemedicine-based collaborative care ($N=179$), because patients assigned to practice-based collaborative care were not offered telepsychotherapy. The University of Arkansas for Medical Sciences Institutional Review Board approved the protocol.

Patients assigned to telemedicine-based collaborative care were educated about four treatment options by a nurse depression care manager. The options included watchful waiting with self-management, antidepressant pharmacotherapy, cognitive-behavioral therapy (CBT) (offered via videoconferencing), or a combination. The care manager followed up with patients by telephone every two weeks; they were monitored for depression symptoms (PHQ-9), medication and psychotherapy adherence, side effects, and self-management. Patients were followed by the care manager for 12 months after enrolling in the study or until their depression symptoms remitted. If a patient did not respond to two trials of a treatment (medication or psychotherapy), a telepsychiatry consultation was scheduled. Patients who did not respond to an antidepressant trial were specifically encouraged to initiate and complete the CBT option. The nurse care manager provided detailed information about the treatment modality (videoconferencing equipment in the primary care office), content (oral and written descriptions

of the CBT manual), and duration (the typical course of treatment included 12 to 16 weekly sessions). Telepsychotherapy was offered at no cost, with appointment scheduling and attendance facilitated by the depression care manager. The intervention has been described in detail elsewhere (10).

Data were collected via blinded telephone interview by the research team. At baseline, the Depression Outcomes Module (11) was used to collect sociodemographic information and depression treatment history. Antidepressant treatment, measured by self-report, was defined as having been prescribed an antidepressant medication at any time during the 12 months after baseline. Current major depression was measured by using the Mini International Neuropsychiatric Interview (12) at baseline. Items from the Depression Health Beliefs Inventory (13) assessed perceived access to and perceived need for depression treatment in primary care according to the conceptualization of access described by Fortney and colleagues (5) and summarized above. Perceived access was measured with four statements, each on a 5-point scale from strongly agree to strongly disagree. Perceived access variables were coded so that a higher score represented greater barriers to access. Perceived need variables were coded so that a higher score represented greater perceived need.

The primary outcomes were stated acceptability of counseling (psychotherapy), scheduling a telepsychotherapy appointment, attending at least one telepsychotherapy session, and engaging in telepsychotherapy. Acceptability was measured with the following statement: "I'm going to read you a list of things that other people have tried when they are sad to help them feel better. How acceptable is each activity to you?" Patients who rated "seeking one-on-one counseling from a mental health professional" as "definitely acceptable" or "acceptable" were coded as accepting of counseling.

Data on scheduling a telepsychotherapy appointment were collected via depression care manager records; scheduling an appointment was defined

as requesting or agreeing to enroll in telepsychotherapy. Engagement in telepsychotherapy was defined as attending at least eight sessions, which has been determined to be an adequate number to achieve a therapeutic effect (14).

Patients were the unit of the intent-to-treat analysis. It was not necessary to adjust standard errors because of the potential nesting of patients within clinics. Independent variables with missing values were imputed with the MI and MIANALYZE procedures in SAS. We specified four logistic regression models with the following dependent variables: acceptability of counseling, scheduling telepsychotherapy, attending a telepsychotherapy session, and engagement in telepsychotherapy. Variables were included in the model based on our theoretical conceptualization of access to care (5). Treatment history variables were included in the model because past utilization is a strong predictor of future utilization and may tap into perceptions of need not captured by the other independent variables. Race was not included in the model predicting engagement because all patients who became engaged in telepsychotherapy were Caucasian.

Results

The sample ($N=179$) included mostly women ($N=147$, 82%). Most sample members were white ($N=128$, 71%); 76 (21%) were African American, 18 (5%) were Native American, and nine (3%) were classified as other. The mean \pm SD age of the sample was 47 ± 12 years. Most sample members ($N=144$, 81%) met diagnostic criteria for major depressive disorder at baseline. The mean travel distance to the primary care clinic was 11.6 ± 18.7 miles.

Three-quarters of the patients in the sample ($N=136$, 76%) stated that counseling was acceptable or very acceptable. In comparison, 148 (83%) reported that antidepressant medication was acceptable or very acceptable. Only 32 (18%) rated antidepressant medication as more acceptable than psychotherapy, and only 20 (11%) rated psychotherapy as more acceptable than antidepressant medication.

Despite the high rate of self-reported acceptability of counseling, only 68 (38%) scheduled a psychotherapy appointment. Of the 179 patients in the sample, only 30 (17%) attended at least one session; 14 (8%) engaged in telepsychotherapy (that is, they attended at least eight sessions).

Of the 24 patients who attended at least one session, the mean number of sessions was 10 ± 8 (range of one to 19). Very few patients (in either arm of the study) received specialty mental health care outside the study. Six (3%) patients in telemedicine-based collaborative care and seven (4%) patients in the practice-based collaborative care had outpatient specialty mental health encounters with a psychiatrist, psychologist, social worker, psychiatric nurse, or counselor.

The first logistic regression model predicted the stated acceptability of counseling (Table 1). None of the demographic or access variables were significant predictors of acceptability. Of the variables related to perceived need for care, higher perceived effectiveness of counseling was a significant predictor of acceptability (odds ratio [OR]=9.15, $p < .001$). None of the treatment history variables were significantly associated with acceptability.

The second logistic regression model predicted scheduling a telepsychotherapy appointment. None of the demographic variables were significant predictors. Of the perceived-access variables, a higher perceived geographic barrier was negatively associated with scheduling an appointment (OR=.59, $p = .02$). Of the perceived-need variables, two were positively associated with scheduling a telepsychotherapy appointment: higher perceived susceptibility (the likelihood that symptoms will go away by themselves) (OR=1.62, $p = .03$) and higher perceived effectiveness of counseling (OR=2.28, $p < .01$). None of the treatment history variables were significantly associated with scheduling an appointment.

The third logistic regression model predicted attending at least one telepsychotherapy session. None of the variables (demographic, perceived access or need, or depression treatment history) were significant predictors. The fourth logistic regression model

predicted engagement in telepsychotherapy. None of the demographic variables were significant predictors. However, no patients from racial-ethnic minority groups became engaged in telepsychotherapy. None of the variables regarding perceived access or need were significant predictors of engagement. Of the treatment history variables, two were significant predictors of engagement: prior receipt of counseling (OR=4.59, $p = .03$) and receipt of an antidepressant prescription during the course of the study (OR=13.63, $p = .04$).

Discussion and conclusions

Although 76% of patients in telemedicine-based collaborative care reported one-on-one counseling to be acceptable, only 17% attended a session of telepsychotherapy and only 8% attended at least eight sessions. However, among the 30 patients who attended at least one session, the mean number of sessions attended was ten, and more than half the patients attended eight sessions or more, suggesting that many patients became engaged once treatment was initiated.

This telemedicine-based collaborative care intervention was designed to improve access to psychotherapy by offering services via videoconferencing in a timely manner, nearby, free of charge, and in the less stigmatizing primary care setting (7). Thus the low levels of utilization were not likely attributable to barriers such as long travel distance, wait time, or cost. Better perceived geographic access was associated with scheduling an appointment but not with initiation of or engagement in telepsychotherapy. It is also unlikely that negative perceptions about the videoconferencing influenced utilization. Research has consistently found that patient satisfaction with telepsychotherapy and with face-to-face psychotherapy is comparable, and the rates of psychotherapy utilization are similar in other studies that refer patients to onsite face-to-face psychotherapy (7).

A history of depression treatment was associated with utilization of telepsychotherapy, prior counseling was associated with attending at least one session and with engaging in

telepsychotherapy, and being prescribed an antidepressant during the study was associated with engaging in telepsychotherapy. These findings are consistent with previous research and support the idea that previous treatment is a predictor of engagement in psychotherapy (1). It is also possible that treatment history was correlated with depression severity, which would influence both help seeking and providers' encouraging their patients to attend telepsychotherapy.

The relatively small proportion of patients who initiated or engaged in psychotherapy suggests a continued need to consider how patient perceptions influence utilization. Two of the perceived-need variables—perceptions of susceptibility (the belief that the depression symptoms will go away by themselves) and treatment efficacy were predictors of initiating telepsychotherapy. This suggests that providing more information about the potential chronicity of depression symptoms, the low likelihood of remission of depression symptoms without treatment, and the effectiveness of psychotherapy may improve willingness to initiate psychotherapy treatment.

Based on these findings, it will be important to explore alternative approaches to improve psychotherapy utilization, such as the referral process. In the intervention, the referral process was similar to traditional referral processes to offsite specialty mental health care. In contrast to traditional referral models in which patients are given a future appointment with an unknown therapist, models that feature spatially colocated, fully integrated, collaborative care have demonstrated very high initiation rates for mental health referrals (15). The high level of initiation in fully integrated models is likely attributable to "open access" clinics, where there is an immediate "warm handoff" of the patient from the primary care provider to the therapist. In light of the findings of this study, it is important to consider how the open-access approach can be adapted for telemedicine.

There are several limitations to the study. First, no causal inferences for stated acceptability of psychotherapy

Table 1

Logistic regression models predicting acceptability of counseling and initiation of and engagement in telepsychotherapy among 179 primary care patients with depression

Variable	Counseling acceptable			Scheduled a telepsychotherapy session			Attended at least 1 telepsychotherapy session			Completed 8 telepsychotherapy sessions		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Demographic												
Age	.99	.96–1.05	.85	.97	.94–1.01	.17	.98	.94–1.02	.29	.98	.93–1.04	.55
Male (reference: female)	.63	.19–2.01	.43	.33	.09–1.17	.09	.54	.11–2.76	.46	.26	.02–2.85	.27
Caucasian (reference: not Caucasian)	1.08	.32–3.67	.90	1.57	.61–4.02	.35	1.49	.47–4.73	.50	— ^a	—	
Perceived access to care ^b												
Geographic ^c	1.70	.93–3.46	.08	.59	.38–.92	.02	.83	.50–1.37	.48	.39	.15–1.05	.06
Temporal ^d	.92	.53–1.41	.78	.87	.54–1.41	.56	.91	.51–1.61	.50	1.61	.71–3.65	.25
Financial ^e	.96	.60–1.55	.88	1.01	.67–1.52	.96	.78	.49–1.25	.31	1.47	.64–3.38	.35
Cultural ^f	.87	.54–1.41	.58	1.24	.84–1.83	.28	1.30	.83–2.04	.25	1.12	.57–2.19	.74
Perceived need for care ^b												
Symptom burden ^g	1.65	.89–3.08	.11	1.63	.95–2.82	.08	1.29	.66–2.51	.45	1.68	.55–5.10	.36
Susceptibility ^h	1.24	.74–2.09	.42	1.62	1.04–2.51	.03	1.05	.63–1.74	.86	1.07	.50–2.29	.86
Stoicism ⁱ	.77	.50–1.21	.27	.91	.65–1.27	.59	1.16	.78–1.72	.47	.69	.38–1.25	.23
Psychotherapy treatment efficacy ^j	9.15	4.30–19.4	<.001	2.28	1.27–4.00	.006	1.51	.77–2.95	.23	1.04	.46–2.36	.92
Medication treatment efficacy ^k	.81	.39–1.66	.57	.72	.42–1.25	.24	1.12	.58–2.19	.73	1.28	.42–3.91	.65
Depression treatment history (reference: none)												
Prior counseling	2.28	.60–8.65	.26	.85	.08–8.81	.89	2.48	.93–6.58	.07	4.59	1.17–18.07	.03
Prior antidepressant treatment	.45	.11–1.77	.26	.93	.31–2.84	.91	.72	.21–2.41	.59	3.53	.90–37.57	.29
Concurrent antidepressant treatment	.53	.16–1.75	.30	1.92	.79–4.69	.15	1.64	.57–4.75	.36	13.63	1.15–161.81	.04

^a All patients who became engaged in telepsychotherapy were Caucasian.

^b All variables measuring perceived access and need were rated on a scale of 1, strongly disagree, to 5, strongly agree.

^c “Arranging transportation to receive depression treatment from my regular doctor would be difficult.”

^d “Receiving depression treatment from my regular doctor would take too much time or be inconvenient.”

^e “Receiving depression treatment from my regular doctor would cost too much.”

^f “If I saw my regular doctor for treatment of depression symptoms I’ve been experiencing, I would be embarrassed about what my friends or family might think.”

^g “The depression symptoms I have been experiencing are serious enough that I have considered getting help from a doctor for them.”

^h “The depression symptoms I have been experiencing will go away by themselves eventually.”

ⁱ “I ought to be able to handle my depression symptoms on my own.”

^j “If I got counseling for depression, it would be helpful.”

^k “If I took medication for depression, it would be helpful.”

can be made because both the dependent and the independent variables were measured at baseline. In addition, acceptability of treatment may not be directly comparable to treatment preference elicited in other studies, because patients in this study were not asked to rank treatments as preferable to one another. Although this limits comparability of our findings, they are consistent with current practice, because patients are rarely asked to choose either medication or

psychotherapy treatment. Another possible limitation is that the measure of acceptability was not specific to the intervention being offered (for example, the study did not ask about the acceptability of CBT conducted by videoconferencing). Because acceptability was measured at baseline for primary care patients, who were presumed to be naïve to CBT and videoconferencing, the term “one-on-one counseling” was used to measure general acceptability of this

treatment compared with medication. Finally, the small numbers of patients who attended or became engaged in telepsychotherapy limited our ability to detect the significance of potentially important predictors. Post hoc power analysis revealed that there was adequate power (.8) to detect ORs of 3.7 for attending telepsychotherapy and ORs of 4.7 for engaging in telepsychotherapy.

Overall, patient attendance and engagement in telepsychotherapy was

relatively rare. Perceived-need variables that were associated with utilization of telepsychotherapy were limited to perceived susceptibility and efficacy, which should encourage the use of psychoeducational interventions to promote engagement. It may be that the traditional referral process had a negative impact on utilization. Future research should determine how to successfully integrate telepsychotherapy services into remote primary care clinics in such a way that patients will initiate and engage in evidence-based psychotherapies.

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