Enabling lay providers to conduct CBT for older adults: key steps for expanding treatment capacity

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Abstract

The Institute of Medicine advocates the examination of innovative models of care to expand mental health services available for older adults. This article describes training and supervision procedures in a recent clinical trial of cognitive behavioral therapy (CBT) for older adults with generalized anxiety disorder (GAD) delivered by bachelor-level lay providers (BLPs) and to Ph.D.-level expert providers (PLPs). Supervision and training differences, ratings by treatment integrity raters (TIRs), treatment characteristics, and patient perceptions between BLPs and PLPs are examined. The training and supervision procedures for BLPs led to comparable integrity ratings, patient perceptions, and treatment characteristics compared with PLPs. These results support this training protocol as a model for future implementation and effectiveness trials of CBT for late-life GAD, with treatment delivered by lay providers supervised by a licensed provider in other practice settings.

Keywords

Psychotherapy, Lay providers, Older adults

Given the growing needs for mental health care among older adults, the Institute of Medicine advocates the examination of innovative models of care to expand mental health services available for this population [1], including the use of nontraditional health-care providers [2, 3]. Many older adults with mental health needs, including anxiety, have coexisting chronic and acute physical health conditions, and other functioning limitations [1, 4]. Therefore, receiving services within integrated service environments, such as primary care, is important to improve access to mental health care. The IOM noted that current numbers of personnel with specialty expertise in geriatric mental health are inadequate (4 % of psychologists in clinical practice) and that the geriatric population is growing [1]. A small number of advanced practice registered nurses have specialty certification in psychiatric/mental health or gerontological nursing. Four percent of advanced practice registered

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 NCT00765219

Implications

Policy: Advancing regulatory guidance and reimbursement models for expert clinicians to function as trainers and supervisors of lay providers can address the current and projected shortage of geriatric mental health providers.

Research: Research is needed on models of training and practical competency assessment for diverse providers of mental health care for older adults.

Practice: Training and supervision of lay providers can expand the availability of CBT for older adults.

nurses are certified in psychiatric/mental health [5]. Two percent are certified in gerontology [5]. Only half of those certified in gerontology work full time as a gerontological nurse practitioner [6].

The IOM recommends expanding the capacity to meet mental health needs through developing new models of care within existing service settings that include training and supervision procedures to facilitate an expanded workforce [1]. A handful of studies have demonstrated positive outcomes when lay counselors, including community health workers, deliver mental health care to younger adults [7–9]. Recent literature reviews also have concluded that mental health outcomes, in particular, for anxiety and depression, are comparable when expert and nonexpert providers deliver care [10, 11]. Treatment trials for depression in older adults [12–14] have demonstrated positive outcomes when providers with various healthcare backgrounds deliver care (e.g., social workers, clinical case managers, nurses). Only recently, however, have positive mental health outcomes for older adults have been demonstrated when care was provided by bachelor-level lay providers (BLPs) with

no healthcare background working under the supervision of a licensed mental health expert [15]. In addition to successful treatment trials, further knowledge about how to implement effective treatment trials is essential, including the system requirements for preparation of effective providers, training strategies, and best practices for supervision and consultation [16, 17].

In this trial, outcomes following cognitive behavior therapy (CBT) for late-life generalized anxiety disorder (GAD) were comparable when five BLPs and five Ph.D.-level expert providers (PLPs) provided care, and outcomes in both treatment groups were improved relative to usual care (UC) [15]. Specifically, relative to UC, CBT delivered by BLPs and PLPs resulted in significant reductions in GAD severity, anxiety, depression, and insomnia, as well as increased mental health quality of life [15]. These data support IOM recommendations and the development of new models of late-life anxiety care that rely on lay providers supervised by experts and have the potential to expand reach and implementation readiness for evidence-based mental health care. Highly critical to implementation of this model is a systematic description of training and supervision procedures for lay providers. This allows an examination of the validity of training procedures and facilitates communication with other healthcare systems that want to incorporate similar intervention strategies.

This article describes training and supervision procedures for lay providers in the recent clinical trial [15] and examines validity indicators of treatment integrity. As previously reported [15], lay providers (BLPs) demonstrated good adherence (above 7 on a 0–8 scale) and competence (above 6 on a 0–8 scale) with treatment procedures. Ratings by independent treatment integrity raters (TIRs) for lay providers were significantly lower than for expert providers (BLPs: mean adherence=7.32 (SD=0.68) and PLPs: mean adherence=7.66 (SD=0.60), BLPs: mean competence=6.60 (SD=0.91) and PLPs: mean competence=7.12 (SD=0.83)). While statistically significant, these small differences between BLP and PLP ratings may not be clinically meaningful. The average number of sessions and proportion of patient choices for in-person versus telephone sessions were equivalent in the two groups of providers [15]. In addition, the average weekly supervision time did not differ significantly between BLPs (0.52 h (SD=0.08)) and PLPs (0.40 h (SD=0.14)). These data, however, do not address other validity elements of the training process. Here, we examine training-process variables, including additional details about provider integrity, patient perceptions of treatment and providers (credibility and expectancy, satisfaction, exit interview questions), and treatment characteristics (amount of homework, duration of sessions, elective modules selected) between BLPs and PLPs. We expected the two groups of providers to be comparable on these validity elements of the training process. Accordingly, this manuscript describes a training program for lay providers that could serve as a model for other implementation efforts and/or research.

METHOD

Treatment study overview

As reported in Stanley et al. [15], participants were recruited from October 2008 to April 2012 through internal medicine, family practice, and geriatric clinics at the Baylor College of Medicine and the Michael E. DeBakey VA Medical Center. Interested patients were asked two anxiety screening questions from the PRIME-MD [18]. If patients answered “yes” to at least one PRIME-MD anxiety screening question, we asked them to continue with the study. The Structured Clinical Interview for DSM-IV Disorders (SCID-IV) [19] and the six-item cognitive screener [20] were administered to provide diagnostic assessment and screen for cognitive difficulties. An individual met inclusion criteria and was invited to continue with the study if (1) he/she had a principal or coprincipal DSM-IV diagnosis of GAD of at least moderate severity (4 on 0–8 scale) according to the SCID-IV, (2) he/she was able to speak English, and (3) any psychotropic medication use was of a stable dosage over the prior month. Individuals were not invited to continue with the study if they had any conditions that threatened patient safety or precluded participation, including active suicidal intent; substance abuse within the past month; current psychosis or bipolar disorder; and cognitive impairment, defined as three or more missed items on the six-item cognitive screener [20]. Excluded patients were given appropriate referrals.

Of the 999 participants who screened positive, 562 (56.3 %) signed a consent. Of these, 3 (0.5 %) were too young, and 10 (1.8 %) screened negative at the in-person visit, leaving 549 (97.7 %) eligible for diagnosis, 493 (90.0 %) of whom completed a diagnostic interview. Of the 493 who completed a diagnostic interview, 239 (48.5 %) met the inclusion criteria. Of these, 223 (93.3 %) completed the baseline assessment and were randomized to BLP, PLP, or usual care (UC). Of the participants assigned to BLP ($n=76$) or PLP ($n=74$), three dropped out prior to completing any treatment sessions. Only the 147 participants assigned to BLP ($n=74$) or PLP ($n=73$) conditions who began treatment are included here.

Included patients had a mean age of 66.85 years (SD=6.43) and 15.47 years (SD=3.13) of education, and 50.34 % were women. The majority (80.27 %) were Caucasian, with 15.65 % African American, 2.04 % Asian, 1.36 % multiracial, 0.68 % American Indian/Alaskan native, and 10.88 % Hispanic [15]. There were no differences between treatment groups on any of these demographic variables.

Treatment description

As described by Stanley et al. [15], CBT occurred over 6 months. The first 3 months of treatment involved up to 10 skill-based sessions. Sessions included core (education and awareness training, deep breathing, coping statements) and elective skills (behavioral activation, exposure, sleep-hygiene skills, problem solving, progressive muscle relaxation, thought stopping, and cognitive restructuring). Providers recommended skills based on patient endorsement of symptoms, but patient

preference determined the modules selected for treatment. The first two sessions were face to face. Following these sessions, patients could decide whether to meet in person or over the telephone. At each session, patients were provided workbook pages with skill summaries and practice exercises. Two or three days after each session, the provider called the patients to review skills and answer any questions. During the second 3 months, providers called the patients weekly for 4 weeks and then biweekly for 8 weeks to review skills and provide support for continued skill use (booster sessions).

Providers are described in more detail in the main outcome article [15]. CBT was provided by five BLPs who had no previous mental health training or experience and five PLPs who were postdoctoral fellows with formal training and experience in CBT for late-life anxiety. As noted previously [15], PLPs had an average of 1.3 years ($SD=0.45$ years) providing CBT for late-life anxiety and 3.8 years ($SD=2.59$ years, range=1 to 8 years) of other CBT experience. BLPs were allowed to see patients in the study for no more than 2 years to maintain their nonexpert status. After 2 years of seeing patients with ongoing supervision, BLPs would have been considered more advanced practitioners and their expertise would no longer be equivalent to a “bachelor-level lay provider.” All providers (BLPs and PLPs) were women, and there was no significant age difference between provider groups [15]. BLPs had a bachelor’s degree and were selected by an experienced program manager (PW) and senior expert in late-life anxiety (MS) through interviews to assess communication and interpersonal skills [15].

BLP and PLP training and supervision

BLP training—Prior to seeing study patients, BLPs underwent training that involved readings, didactic training, audiotape review of CBT sessions, and role plays for approximately 45 h (see Table 1). First, they read

material related to CBT, GAD, late-life anxiety, aging and cognitive disorders, program procedures and the treatment manual and workbook (8 h). BLPs then attended two didactic training sessions provided by the program director (MS) (3 h). One session covered CBT principles as they apply to anxiety and depression, empirical literature related to CBT for late-life anxiety and depression, and the development of the treatment approach. The other didactic session covered patient-enrollment procedures (recruitment, selection, screening, and diagnostic processes); course of treatment, including core and elective sessions; and highlights of the readings. BLPs next listened to two sets of CBT tapes (20 h) of expert providers conducting the protocol treatment. They discussed these sessions and conducted role plays (5 h) of all core and elective skill sessions with an expert provider. Finally, BLPs provided treatment for two practice patients, one with an expert in the room, and the other alone. BLPs spent an average of 9.21 h ($SD=5.02$ h) seeing practice patients. Variability in time spent with practice patients reflected different session frequency and duration. All sessions for practice patients were audio taped. The first author (CKS), a licensed psychologist and expert in CBT for late-life anxiety, served as clinical supervisor for the BLPs and rated audio tapes of sessions with practice patients, using adherence and competency ratings of 0 (no adherence/competence) to 8 (optimal adherence/competence) scales. If adherence and competence ratings were adequate (4 or higher on a scale of 0–8), BLPs progressed to seeing study patients. A cutoff of 4 for adherence and competence was used to allow variability and representativeness of nonexpert provider skill level.

BLP supervision—All BLP sessions were audio taped. Following BLP training, the clinical supervisor could also review audio tapes of any therapy session at her or the BLP’s request to provide additional feedback. Finally, throughout their entire involvement in the

Table 1 | BLP and PLP training hours estimates

Training element	Provider	
	BLP	PLP
Reading		
Materials related to CBT, GAD, late life anxiety, aging and cognitive disorders, program procedures and treatment manual and workbook	8 h	4 h
Didactic training sessions		
Session 1—CBT principles for anxiety and depression, CBT for late-life anxiety and depression, and development of treatment approach	3 h	1.5 h
Session 2—patient enrollment procedures, course of treatment including all modules and highlights of the readings		
Listening to expert sessions		
10 h per expert case	20 h	10 h
Role plays		
All core and elective modules with expert provider	5 h	0 h
Total training hours before seeing practice patient (BLP only)	36 h	
Practice patients^a		
Expert in room for one patient	9.21 h (SD 5.02 h)	0 h
Total	45.21 h	15.5 h

BLP bachelor-level provider, PLP Ph.D.-level provider, CBT cognitive behavioral therapy, GAD generalized anxiety disorder

^a Variability in BLP time spent with practice patients reflected in different session frequency and duration

program, BLPs had weekly group supervision meetings with the clinical supervisor.

PLP training—PLP training was focused on standardizing the elements of the treatment protocol. PLPs read materials (4 h) related to the nature and treatment of GAD in younger and older adults, psychotherapy for mental illness in late life, and the treatment manual and workbook. They also attended one didactic training session (1.5 h) that addressed procedural details about patient enrollment (recruitment, selection, screening, and diagnostic processes) and course of treatment, including core and elective sessions. PLPs listened to one set of CBT tapes (10 h) of an expert provider's conducting protocol treatment and discussed sessions with the senior author (MS), a licensed psychologist and expert in CBT for late-life anxiety, who served as the PLP supervisor. The total training hours for PLPs were 15.5 h (see Table 1).

PLP supervision—All sessions conducted by PLPs were audio taped. The clinical supervisor (MS) reviewed and rated audio tapes of all sessions of the first study patient for each PLP and two randomly selected sessions for the second patient. PLPs also had weekly group supervision meetings with the clinical supervisor. In addition, the supervisor could also review any subsequent session audio tape to provide additional feedback.

Treatment integrity

As noted previously [15], all CBT sessions were audio taped for assessment of treatment integrity; and 20 % were selected randomly for review of adherence and competence by independent TIRs. TIRs were experts in late-life anxiety treatment (GD, DH) who had no other interaction with BLPs or PLPs and did not receive any information about the provider with the session tapes. Ratings and comments from the TIRs were given to supervisors, who subsequently shared the information with providers. If TIR ratings of BLP or PLP adherence or competence fell below 4 for two consecutive tapes, the supervisor would listen to all treatment sessions until ratings were 4 or above for two consecutive sessions. However, no BLP or PLP scored below this cutoff; thus, there was no need for remediation.

Measures

TIR perceptions of provider status—TIRs indicated for each rated session whether they perceived the provider was a BLP or a PLP. They also rated their confidence in this conjecture on a 0 (low)-to-8 (high) scale.

Patient perceptions—Patient perceptions included treatment credibility and assessment of treatment expectancies and posttreatment satisfaction. Credibility and expectancies were rated as in prior clinical trials [21, 22], using the four-item Expectancy Rating Scale (ERS) [23], which includes three items that measure credibility (degree of logicity of the treatment, confidence in undergoing treatment, and recommending it to others) and

one item that measures expectations for the treatment's success. All items were rated on a 1 to 10 scale, with higher scores indicating greater logicity, confidence in, and expectancies for treatment. The ERS was given also as in prior trials [21] between sessions 1 and 3 to assess patients' initial perceptions and expectations of the treatment after having an introductory session.

Satisfaction was measured with the Client Satisfaction Questionnaire (CSQ) [24], an eight-item measure that addresses satisfaction with CBT, and a semistructured exit interview. The CSQ is an eight-item, empirically derived, self-report measure that is widely used to assess patient satisfaction with services [25]. The CSQ-8 has a good internal consistency with alpha of 0.93 [25]. The measure also correlated with client and therapist global ratings of improvement, as assessed by two single-item improvement ratings, the Client Self Rating Scale ($r_s = -0.34$) and the Therapist Global Rating Scale ($r_s = -0.33$) [25]. Client satisfaction was negatively correlated ($r_s = -0.40$) with change on the Client Checklist (a self-report symptom checklist composed of items from the SCL-90 [26], suggesting that greater symptom reduction was associated with higher levels of satisfaction [25].

The exit interview included questions that assessed patients' perceptions of the therapist and the overall treatment program (see Table 2). Each question had 4-point response options and included items related to how well the therapist understood the patient's anxiety problems (1=did not understand at all to 4=understood a great deal), how helpful the therapist was in helping the patient learn anxiety-management skills (1=not at all helpful to 4=very helpful), how experienced the patient perceived the therapist to be (1=not at all to 4=very experienced), how many years the patient estimated that the therapist had worked as a therapist (1=less than 1 year to 4=more than 5 years), how helpful the program was in helping the patient manage anxiety (1=not at all helpful to 4=very helpful), and how confident the patient was that he/she would continue to use learned skills to manage anxiety (1=not at all sure to 4=very sure). The CSQ and exit interview were given at the 6-month assessment following CBT.

Treatment characteristics—Treatment characteristics included the mean number of skills taught and practice exercises completed each week, average duration of sessions, mean number of booster sessions, and selection of elective treatment modules.

Data analysis

We examined differences between BLPs and PLPs in training process, patient perceptions, and treatment characteristics, using independent samples *t* tests and chi-square tests. We used the Wilcoxon-Mann-Whitney test and Fisher's exact test when distributional assumptions were unlikely to be met (i.e., small cells, nonnormal distributions). The interaction between the provider's actual experience and the TIR's perception of that provider's experience on TIR's confidence in

Table 2 | Patient responses to exit interview by provider groups

	Mean (SD), unless otherwise noted		t/x^2 ^a	df	<i>p</i> value
	BLP (<i>n</i> =46)	PLP (<i>n</i> =58)			
How well would you say that your therapist understood your anxiety problems? <i>n</i> (%) ^b					
Did not understand at all	0 (0.00)	0 (0.00)	N/A	N/A	0.10
Understood a little bit	0 (0.00)	0 (0.00)			
Somewhat understood	7 (15.56)	3 (5.17)			
Understood a great deal	38 (84.4)	55 (94.83)			
How helpful was your therapist in helping you to learn anxiety management skills?	3.93 (0.25)	3.97 (0.18)	0.70	80.37	0.49
In your opinion, how experienced was your therapist?	3.74 (0.44)	3.83 (0.38)	1.09	102	0.28
How many years do you think your therapist has worked as a therapist? <i>n</i> (%)	2.63 (0.64)	3.16 (0.70)	3.94	102	0.0001
Less than 1 year	0 (0.000)	0 (0.00)			
1 to 3 years	21 (45.65)	10 (17.24)			
3 to 5 years	21 (45.65)	29 (50.00)			
More than 5 years	4 (8.70)	19 (32.76)			
In your opinion, how helpful was the Peaceful Living Program in helping you to manage your anxiety?	3.67 (0.56)	3.78 (0.46)	1.02	102	0.31
How confident are you that you will continue to use the skills that were taught in the Peaceful Living Program to manage anxiety in the future?	3.67 (0.63)	3.79 (0.45)	1.08	78.19	0.28
How helpful would you rate the telephone session(s) to learn how to manage your anxiety? ^c	3.57 (0.65)	3.55 (0.61)	0.14	86	0.89

Exit interview data are presented for *n*=104 (BLP=46, PLP=58) participants who completed the exit interview, unless otherwise noted

BLP=bachelor-level provider, PLP=Ph.D.-level provider

^a Independent samples *t* test for interval variables and chi-square test (or Fisher's exact test) for categorical variables. There is no test statistic or degrees of freedom for Fisher's exact test

^b *n*=103 participants responded to this item (BLP=45, PLP=58)

^c *n*=88 participants responded to this item (BLP=37, PLP=51)

that conjecture was examined, using multiple linear regression and follow-up with simple slopes analyses. All analyses were conducted using SAS version 9.3 (SAS Institute, Cary, NC).

RESULTS

TIR perceptions

TIRs rated 242 sessions (118 BLP and 124 PLP). Overall, TIRs correctly identified BLPs and PLPs 68.2 % of the time. The chance corrected agreement rate (kappa) was 0.36 (95 % CI: 0.25–0.47). TIRs accurately identified PLPs 83.1 % of the time but accurately identified BLPs only 52.5 % of the time. In other words, about half the time (47.5 %), TIRs rated a BLP as a PLP.

There was a significant interaction between actual and TIR-perceived provider status predicting TIR confidence ratings, $F(3, 229)=16.11$, $p<0.0001$ (see Fig. 1). For actual BLPs, TIR confidence ratings were equivalent, regardless of their accuracy, $\beta=-0.006$, $p=0.947$. For actual PLPs, however, TIR confidence ratings were significantly higher when TIR perceptions were accurate (i.e., PLP identified as a PLP) than when they were inaccurate (i.e., PLP identified as BLP), $\beta=-0.463$, $p<0.001$.

Patient perceptions

In terms of treatment credibility and expectancies, ERS ratings were comparable in the BLP and PLP groups, indicating that patients reported equivalent credibility (BLP=22.06 [SD=5.35], PLP=23.64 [SD=4.70], $t(140)=1.88$, $p=0.06$) and expectancies (BLP=7.04 [SD=2.20], PLP=7.42 [SD=1.90], $t(143)=1.12$, $p=0.26$) for both types of providers.

Patient satisfaction (CSQ) at 6 months also did not differ between BLP and PLP groups (BLP=29.04 [SD=2.93], PLP=29.74 [SD=2.88], $t(101)=1.18$, $p=0.24$). Moreover, patient responses on the exit interview items demonstrated equivalent estimates of perceived provider understanding and helpfulness, helpfulness of the program, confidence for continued use of skills, and helpfulness of telephone sessions (see Table 2). Patient perceptions of the provider differed significantly only with regard to estimates of years of provider experience. Patients estimated PLPs as having more years of experience than BLPs.

Treatment characteristics

Overall, treatment characteristics were comparable between BLPs and PLPs. Patients in both BLP and PLP groups learned an average of three elective skills (see Table 3). Average number of practice exercises completed per week also was equivalent in BLP and

TIR = treatment integrity rater; BLP = Bachelor-level provider; PLP = PhD-level provider

Fig. 1 | Confidence with rating as a function of actual provider status and TIR's perception of provider status

PLP groups (see Table 3). Although average overall length of sessions was significantly longer when treatment was provided by BLPs than PLPs, this difference occurred only for in-person sessions (not telephone sessions), and sessions conducted by BLPs were approximately only 5 min longer than sessions conducted by PLPs (see Table 3). On average, patients seen by PLPs completed approximately one more booster session than those seen by BLPs. With regard to selection of elective modules, BLPs taught the Problem-Solving module significantly more often than PLPs, while PLPs taught the Thought-Stopping module more often than BLPs. There were no significant differences between BLP and PLP providers' use of the other elective modules.

DISCUSSION

The training and supervision procedures for BLPs led to comparable integrity ratings, patient perceptions, and treatment characteristics compared with PLPs. As reported by Stanley et al. [15], outcomes for patients were comparable with CBT conducted by BLPs and PLPs. These results support this training protocol as a model for future effectiveness and implementation trials of CBT for late-life GAD, with treatment delivered by lay providers supervised by a licensed provider in other practice settings. Gaps in service to a growing underserved population of older adults cannot be addressed by the projected number of licensed providers [1]. This model of training and supervision is relevant to IOM recommendations to

Table 3 | Treatment characteristics of BLP and PLP sessions

	Mean (SD), unless otherwise noted		<i>t</i> / <i>χ</i> ^{2a}	<i>df</i>	<i>p</i> value
	BLP (<i>n</i> =74)	PLP (<i>n</i> =73)			
Number of elective skills	2.74 (1.57)	3.10 (1.45)	1.42	145	0.16
Number of practice exercises completed by patients per week	2.28 (1.21)	2.51 (1.26)	1.16	145	0.25
Duration of sessions (min)					
Overall	44.85 (9.33)	40.17 (7.42)	3.36	145	0.001
Phone only ^b	38.13 (9.86)	36.58 (6.11)	0.98	80.06	0.33
In-person only	47.37 (9.34)	42.52 (8.55)	3.28	145	0.001
Number of booster sessions	4.72 (2.77)	5.70 (2.58)	2.22	145	0.03
Behavioral activation only, <i>n</i> (%)	16 (21.62)	26 (35.62)	3.53	1	0.06
Exposure only, <i>n</i> (%)	24 (32.43)	20 (27.40)	0.44	1	0.51
BA and exposure <i>n</i> (%)	10 (13.51)	10 (13.70)	0.001	1	0.97
Sleep, <i>n</i> (%)	14 (18.92)	16 (21.92)	0.20	1	0.65
Problem solving, <i>n</i> (%)	33 (44.59)	15 (20.55)	9.66	1	0.002
PMR, <i>n</i> (%)	30 (30.52)	41 (56.16)	3.59	1	0.06
Thought stopping, <i>n</i> (%)	35 (47.30)	49 (67.12)	5.90	1	0.02
Cognitive restructuring, <i>n</i> (%)	41 (55.41)	49 (69.12)	2.13	1	0.14

Treatment Characteristics are presented for *n*=147 (BLP=74, PLP=73) participants who completed at least one session, unless otherwise noted

BLP=bachelor-level provider, PLP=Ph.D.-level provider, PMR progressive muscle relaxation

^a Independent samples *t* test for interval variables and chi-square test for categorical variables

^b Only 113 participants (62 BLP and 51 PLP) completed at least one session over the phone

develop novel models of care to expand the reach of mental health treatment for older adults.

Strengths of this model include a relatively short training period required for BLP providers (approximately 45 h) and only approximately 30 minutes per week of ongoing supervision, which led to good adherence and competence, equivalent patient ratings of credibility and expectancy, and comparable treatment characteristics. Generalizability of this model is impacted by assessment and selection procedures that excluded individuals with more significant psychiatric difficulties who would likely be referred to and treated in specialty mental health clinics. These procedures were carried out by expert providers who conducted the diagnostic screenings; lay providers did not participate in screening, assessment, or selection decisions. Thus, the treatment model requires inclusion of an expert provider to determine (based on diagnostic screenings) which patients have symptoms likely to benefit from this treatment protocol. The treatment model also required an expert provider to be available for ongoing weekly supervision, as well as for immediate supervision of crisis situations (such as a patient's expressing suicidal ideation). These additional supervisory roles would be key to continued implementation of this model. Future directions include determining cost and generalizability of this model to other settings (e.g., community service agencies) and other nontraditional providers (e.g., community health workers). Key dimensions of future implementation studies could also include examining other key delivery characteristics of the model, including procedures for selection of effective lay providers and tools for maintaining adequate fidelity to program components delivered in community settings.

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