Implementing Transdiagnostic Cognitive Behavioral Psychotherapy in Adult Public Behavioral Health: A Pilot Evaluation of the Feasibility of the Common Elements Treatment Approach (CETA)

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Abstract

Few evidence-based psychotherapies are provided in adult public behavioral health (PBH), despite the need for such treatments. The common elements treatment approach (CETA) was developed for use by lay providers in low- and middle-income countries and may have relevance in PBH given its unique application with individuals with multiple diagnoses including PTSD, depression, and anxiety. This study utilized data collected as part of the implementation of CETA in 9 PBH agencies in Washington State with 58 providers, including a 2-day workshop and 6 months of consultation. Outcomes included provider-perceived skill in CETA delivery, training and consultation completion rates, and perceived appropriateness of CETA for clients. Thirty-nine (67%) providers completed requirements for training and consultation, and delivered CETA to a total of 56 clients. Perceived competence in delivering CETA improved over time, as well as client

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symptom scores. CETA shows promise for feasible and effective implementation within US-based PBH systems.

Introduction

Roughly one quarter of Americans (26.2%) suffer from a diagnosable mental illness each year, with almost half (46.4%) experiencing some type of psychiatric disorder in their lifetime.[1] The most common types of psychiatric disorders are anxiety and depression, which are frequently comorbid.[2–6] Various statewide and national efforts exist to implement evidence-based psychotherapies to treat these disorders in routine mental health service settings;[7, 8] however, few of these psychotherapies are currently provided.[9–13] As a result, dissemination and implementation of evidence-based psychotherapy has become a national priority.[14] This paper presents results of a pilot study evaluating the implementation of a transdiagnostic cognitive-behavioral psychotherapy in the Washington State public behavioral health (PBH) system to help address this gap between what is known about effective psychotherapies and their use in PBH.

Many people, particularly those who are publicly insured with Medicaid and/or Medicare or receiving social security disability, obtain treatment for psychiatric disorders through the PBH system, making it imperative to focus evidence-based psychotherapy implementation efforts in this setting. It is becoming increasingly common for mental health and substance use disorder treatment services to be integrated and referred to as "behavioral health," which is reflected in the use of the name PBH, often referring to systems that receive public funding to provide treatment services for these conditions.[15] In Washington State, where this study took place, 86,000 adults received services from the PBH system in 2008.[16] Of these, 40% were diagnosed with depression and/or anxiety. Depression and anxiety are conditions for which psychotherapy is known to be particularly effective.[17] Usual care for adults in PBH with anxiety or depression typically includes clinical case management (i.e., engagement, service planning, linkage to resources, consultation with natural supports, collaboration with psychiatrists regarding medication management), crisis intervention, and non-specific psychosocial treatments.[16, 18]

Barriers to implementation and sustainability of evidence-based psychotherapy in PBH include time and role constraints among a workforce that often balances case management and crisis response services, along with serving in a clinical, therapeutic role. Further, the cost of purchasing often proprietary and expensive training, supervision, and implementation packages serve as a barrier to effective uptake, sustainability, and maintenance of evidence-based psychotherapies over time.[19–21] Financing approaches in PBH focus more on payment for services based on the number of clients served vs. duration of service, resulting in frequent, shorter client contacts.[22, 23] Additionally, although PBH settings often serve people with complex psychiatric comorbidities, many evidence-based psychotherapies were designed to address single diagnostic categories (e.g., focusing only on depression or a single anxiety disorder).[24, 25] To address these problems, Rosen et al. (2017) encourage using a transdiagnostic approach to treatment.[26] As of yet, such approaches are not routinely available in PBH settings for adults in Washington State or in most other parts of the USA.[27–30] One notable exception is the partnership between the Beck Community Initiative and city of Philadelphia, which has made great strides toward bringing transdiagnostic cognitive therapy to adult PBH settings. Findings from a recent implementation study by this group indicate that PBH providers were able to be feasibly trained to high fidelity.[31]

Transdiagnostic Cognitive-Behavioral Therapy Approaches

Transdiagnostic cognitive-behavioral therapies employ common practice elements across various cognitive-behavioral approaches (e.g., cognitive restructuring, gradual exposure) that

target common underlying dysfunction or pathology across multiple disorders (e.g., avoidance, fear learning, negative thinking patterns).[32–35] Transdiagnostic treatments are typically conceptualized by either the distillation of common treatment elements[35] or the underlying psychopathology experienced.[36] Data are mounting on the effectiveness of transdiagnostic psychotherapy for both children[35, 37, 38] and adults[33, 39–44] to treat multiple disorders.

Transdiagnostic approaches in PBH that treat posttraumatic stress disorder (PTSD), in addition to anxiety disorders and depression, are important given the high rates of trauma exposure among clients seen in PBH.[45] Additionally, half of those diagnosed with PTSD have three or more coexisting psychiatric disorders including anxiety disorders, mood disorders (including depression), and substance use disorders, among others (e.g., traumatic brain injury, somatization disorders).[1–3] Co-occurring diagnoses of PTSD and depression result in greater distress and impairment than PTSD alone,[4, 5] leading to a larger strain on health care resources.[6, 46] The common elements treatment approach (CETA)[47] is a modular transdiagnostic cognitive-behavioral psychotherapy that targets symptoms of PTSD, depression, and anxiety using a singular manualized approach, potentially limiting the training and supervision burden on busy and modestly resourced PBH settings.

Common Elements Treatment Approach

CETA was originally developed for use in low- and middle-income countries (LMIC) and built upon the work of Chorpita[35] and Barlow[28] who developed transdiagnostic approaches that have been successfully implemented in PBH settings for youths and adults. CETA was developed to be delivered using task-sharing, in which lay counselors with little to no prior mental health training or experience deliver treatment, under supervision of mental health professionals.[28, 35] CETA development involved simplifying treatment language, training, and in-session supports to allow for lay counselor delivery.[47]

In CETA, client symptoms are targeted using a combination of treatment components selected and ordered based on the client's symptoms, as assessed by standardized measures, but may also depend on client preferences, practical considerations, and clinical judgment. Common elements approaches have also been found to be more acceptable to providers in the USA,[48] The ten components of CETA taught in the current evaluation include (1) client engagement and encouraging participation; (2) psychoeducation; (3) anxiety management strategies (i.e., relaxation); (4) behavioral activation; (5) cognitive coping (i.e., engaging in more helpful ways of perceiving and thinking in specific everyday situations and connecting thoughts, feelings, and behaviors); (6) cognitive restructuring (i.e., changing unhelpful negative thoughts and beliefs about oneself, others, or the world) as it relates to the clinical problems of PTSD, depression, and anxiety; (7) imaginal gradual exposure to traumatic memories; (8) in vivo exposure to feared or anxiety-provoking situations; (9) addressing safety (i.e., suicidal/homicidal ideation, domestic violence); and (10) problem-solving. CETA otherwise follows the typical structure of cognitive behavioral therapy (CBT), including setting agendas and assigning homework.

A randomized controlled trial of CETA showed effectiveness in the Thailand/Burmese border; showing large effect sizes for depression and PTSD; moderate effect sizes for impaired function, anxiety, and aggression; and no significant effect on alcohol use.[49] An additional study conducted in Southern Iraq compared cognitive processing therapy (CPT) to CETA. CETA showed large effect sizes for all outcomes (trauma, depression, anxiety, and function), while CPT showed moderate effect sizes for trauma and depression, and small to null treatment effects for anxiety and function.[44, 48]

Implementation of CETA in PBH

The success of CETA within the global mental health context led to the selection of CETA as a potential fit for implementation in the US PBH system. Key commonalities between LMICs and PBH settings include an ethnically and culturally diverse client population with high rates of comorbidity and a provider population with a need for a more streamlined and simplified approach to delivery and ongoing support for psychotherapy (e.g., simplified language; consultation that focuses on how to treat a variety of presenting problems and comorbidities).[50] For instance, the PBH workforce is largely comprised of clinicians holding masters or bachelor's degrees who may not have had specialized training in psychotherapy delivery.[51] Additionally, the developers of CETA welcome adaptations that situate CETA within the local context; the CETA training model assumes some adaptation to materials as providers use CETA in their setting.[52] The adaptability was expected to be welcome in PBH as it would allow providers to both learn from implementation in two diverse settings (Southern Iraq and Thai-Burma border) and continue to innovate as they delivered CETA.

Effective implementation strategies are key for enhancing provider reach[53] and treatment outcomes.[26] Consultation is known to be effective above and beyond a training workshop[38, 54] and provides opportunities to receive feedback on actual efforts to implement the treatment with clients.[55, 56] For instance, Beidas et al.[54] found significant improvement over time in provider skill and knowledge of cognitive-behavioral therapy for child anxiety using workshop training plus consultation, in a sample of 115 community providers. Therefore, the implementation strategy evaluated in the present pilot study included workshop training and ongoing consultation, modeled after the Washington State funded CBT+ initiative.[38] This CBT+ initiative includes an efficient training model in a treatment approach that covers the most common four childhood disorders, emphasizing the common elements across existing evidence-based CBT-based treatments for those four disorders. The initiative includes a 3-day training followed by 6 months of biweekly expert consultation calls. Clinicians are required to deliver the models to two cases with adherence.[38] The approach demonstrated feasibility and acceptability within child public mental health, and therefore incorporating a similar strategy was intuitive for treating adults within the same service setting.

For CETA, senior agency leaders were invited to a 1 hour conference call to encourage commitment to the training and consultation as well as ongoing CETA implementation. At least one agency supervisor was required to participate in the training and consultation, a decision based on findings from the implementation science literature indicating that ongoing clinical supervision is necessary for sustainment beyond the training and consultation period.[57] Clinicians and supervisors were asked to (1) participate in a 2-day CETA training, (2) participate in at least 9 of 12 telephone consultation calls held twice a month where they presented a CETA case at least once, (3) document delivery of CETA for at least 6 sessions of active therapy to at least 1 client, (4) administer pre- and post-test standardized symptom assessments for the clinical target, and (5) complete evaluation surveys conducted prior to the workshop, immediately after the workshop, and at the end of the 12 consultation calls conducted over 6 months.

The two-day training included both didactic and practice-based training in the CETA model; how to conduct each of the ten CETA components targeting anxiety, depression, and posttraumatic stress symptoms (see description of CETA components above); and how to use standardized symptom assessments to determine the order of component delivery. After the training, providers attended expert-led consultation calls twice a month in groups of 9–15 providers for 6 months. During these calls, multiple providers presented case material and the consultants provided feedback and advice on cases. Calls could include additional didactic material as needed or indicated by the consultation group participants. Providers de-identified and documented cases for training and consultation purposes using a secure online clinical decision-support tool or toolkit (i.e., "EBP Toolkit") designed for clinical training purposes.[58] The total number of sessions and timing of the follow-up symptom assessments varied.

Study Aims

Data collected routinely as part of the training and consultation was used to evaluate the implementation strategies used and feasibility of implementing CETA in Washington State PBH. Specifically, findings are presented for provider self-reported competence in delivering CETA as well as implementation outcomes[59] related to the feasibility (i.e., provider engagement and completion of training requirements) and appropriateness of CETA for the adult PBH population. Feasibility is the extent to which a new treatment, or an innovation, can be successfully used or carried out within a given agency or setting.[59] Preliminary client outcomes for those seen as part of the training and consultation are also presented.

Method

Design and Procedure

This pilot evaluation of CETA uses longitudinal data collected routinely during an implementation of CETA across nine agencies in Washington State from December 2014 to July 2015 and was sponsored by the Washington State Division of Behavioral Health and Recovery. No agencies or providers were compensated for their time. Data were collected from provider participants using paper and pen, prior to and after the workshop training, and using an online survey after the 6 months of consultation. Providers engaged PBH clients in CETA of varying treatment length and documented client data via the toolkit. For each client, the clinical target was identified by providers and entered into the online toolkit, along with client responses to standardized symptom assessments gathered as part of treatment. Clients seen by providers participating in this evaluation most commonly had targets of posttraumatic stress and depression. Since anxiety was rarely indicated as a clinical target, symptoms of anxiety are not reported. This study was determined exempt from review by the University of Washington Institutional Review Board.

Setting

Nine public behavioral health agencies in Washington State participated. Four agencies were sponsored by King County, which covered the cost of attending the training. Agencies were responsible for providing a range of services for adults including outpatient and inpatient mental health treatment and outpatient substance use disorder treatment. Although not documented systematically as part of the evaluation, anecdotally, agencies and providers varied considerably in whether they had prior experience implementing and providing evidence-based psychotherapy.

Participants

Provider Participants Each agency nominated several clinicians and at least one clinical supervisor to participate in the training and consultation. Fifty-eight providers total, 13 (22%) clinical supervisors and 45 (78%) clinicians, attended the 2-day workshop (see Table 1). Thirty-nine (67%) of the participants were female. The mean age was 39.2 ($SD = 11.1$) years old. Forty-seven (81%) attendees held a Master's degree (47% Master's in social work) with a mean of 3.9 ($SD = 3.8$) years working at the agency. Data is presented only for those providers who completed all required components of the training and consultation ($n = 39$).

Client Participants Client participants included in the evaluation were those entered into the online training system by provider trainees during the consultation period. Clients seen as part of

Table 1
CETA provider demographics for three groups

	Attended training		Completed workshop requirements		Completed consultation requirements	
Characteristic	*N*	%	*N*	%	*N*	%
Total	58	100%	45	77.6%	39	67.2%
Supervisor	13	22.4%	9	20.0%	7	17.9%
Clinician	45	77.6%	36	80.0%	32	82.1%
Female	39	67.2%	33	73.3%	28	71.8%
Degree						
MSW	27	46.6%	25	55.6%	22	56.4%
Other masters	20	34.5%	13	28.9%	12	30.8%
4-year college	7	12.1%	4	8.9%	3	7.7%
2-year college	2	3.4%	1	2.2%	–	–
Doctoral degree	2	3.4%	2	4.4%	2	5.1%
	Mean	SD	Mean	SD	Mean	SD
Age	39.2	11.1	39.1	11.2	38.7	11.8
Years at agency	3.9	3.8	4.2	4.2	4.3	4.4
Years providing psychotherapy	5.9	6.3	6.0	5.8	6.4	6.1
Years supervising	5.1	5.2	4.7	3.9	5.3	4.1
	N	%	*N*	%	*N*	%
Attrition rate	–	–	13	22.4%	19	32.8%
Attended workshop only (did not engage in consultation)	–	–	10	76.9%	13	68.4%
Left agency	–	–	3	23.1%	3	15.8%
Did not meet client requirements but met provider requirements[a]	–	–	–	–	3	15.8%

CETA common elements treatment approach
[a]Two providers missing one additional follow-up measure, one provider missing six sessions (had four sessions)

the evaluation were otherwise enrolled for behavioral health care in their respective agencies and were determined to be a good fit for CETA by the provider (i.e., could sustain participation in CBT and had clinically significant symptoms of PTSD, depression, and/or anxiety). Fifty-six clients were treated by 39 CETA-trained providers (average of 1.4 clients per provider) who ultimately completed the requirements for training and consultation (see Table 2). Of the 56 clients, 31 (55.4%) were female, their mean age was 46.8 years ($SD = 11.7$), 31 (55.4%) were Caucasian, and the majority had a clinical target of posttraumatic stress ($n = 39$, 70%).

Measures and Variables

Provider Demographics Providers self-reported demographics on baseline evaluation surveys. This included their agency name, whether they were a clinician or supervisor, age, gender, most advanced degree, years at agency, years providing psychotherapy, and for supervisors, the number of years supervising.

Table 2
Client demographics

Characteristic	*n*	Percent
Female	31	55.4%
Age (Mean, *SD*)	46.8	11.7%
Race/Ethnicity		
African American	5	8.9%
Asian	3	5.4%
Latino/Hispanic	6	10.7%
Multiracial	2	3.6%
Not reported	4	7.1%
Other	5	8.9%
White	31	55.4%
Clinical target		
Anxiety	3	5.4%
Behavior	1	1.8%
Depression	13	23.2%
Posttraumatic stress	39	69.6%

Client Demographics Providers reported client age, gender, and race/ethnicity using an online de-identified toolkit.[58]

CETA Self-Reported Competence To assess provider self-reported competence in delivering CETA, providers rated their perceived skill in the use of the CETA model and the 10 components taught during the training on a 17-item survey developed for this evaluation and based on prior work by Dorsey and colleagues.[38] Each item was rated on a scale of 1 (Minimal) to 5 (Advanced) with the prompt, "Please rate your skills in the following areas." Example questions include, "Please rate your skills in explaining the cognitive-behavioral triangle, or the relationship between thoughts, feelings, and behavior" and, "Please rate your skills in engaging clients in therapeutic exposure to traumatic memories to reduce anxiety and avoidance related to the traumatic memory and decrease intrusive symptoms (e.g., nightmares)." Items assessed clinical experience and skill in treating PTSD, depression, and anxiety. Providers completed identical self-reports of skill prior to and immediately after the training, and again after the 6-month consultation. The final survey was completed using an online survey system (i.e., REDCap).[60]

Feasibility of Implementing CETA Provider engagement in CETA and completion of the requirements for CETA training and consultation was used as an indicator of the feasibility of participating in CETA training. Specifically, data on how many providers completed all training and consultation requirements were observed. This included attending both days of the workshop, attending 8 of 12 consultation calls (although a minimum of 9 calls was preferred, providers who completed 8 calls as well as all other requirements were also considered for this requirement), completing 6 or more client sessions, and assessing client symptoms at baseline and an additional second time-point. The number of clients per provider, for those providers completing all training and consultation requirements and engaged in six or more sessions of CETA, was also observed.

Table 3

Descriptive statistics for self-reported competence delivering CETA at each survey time-point

Time-point	Completed training requirements $N = 38$[a], Mean (SD)
Pre-training	3.27 (.64)
Post-workshop	3.78 (.51)
Post-consultation	3.85 (.55)

CETA common elements treatment approach. Item response options are 1 = minimal, 3 = moderate, 5 = advanced

[a]One provider out of the 39 completers did not complete the final survey and is excluded from the analysis

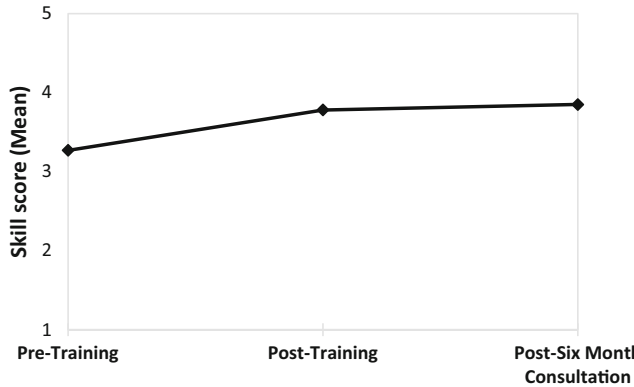
Appropriateness of CETA in PBH Appropriateness is the perceived fit, relevance, or compatibility of the innovation or evidence-based practice for a given practice setting, provider, or consumer; and/or perceived fit of the innovation to address a particular issue or problem.[59] Providers responded to two open-ended questions on the survey given at the end of the twelve consultation calls: "What did not work particularly well with delivering CETA to your clients?" and, "What worked especially well with delivering CETA to your clients?"

Client Outcomes Self-report symptom scores included those entered into the toolkit based on standardized assessments given to clients seen by providers who successfully completed all training and consultation requirements. Symptoms were assessed at baseline, and then again throughout the course of treatment to help guide the treatment model. There were no standardized requirements of when to assess symptom scores throughout the 6 months.

Depressive Symptoms Clients were assessed for depressive symptoms using the Patient Health Questionnaire-9 Item Depression Screen (PHQ-9).[61] The PHQ-9 questionnaire has nine items that assess the severity of depression symptoms according to DSM-IV-TR criteria.[62] Items are rated on

Figure 1

Provider self-report of skills of $N = 38$. Each item was rated on a scale of 1 (Minimal) to 5 (Advanced). One of the providers who completed the requirements did not complete the 6-month time point



a scale from 0 (Not at all) to 3 (Nearly every day) and summed to get a score. Higher scores indicate greater severity. The PHQ-9 has established reliability and validity for clients seen in public behavioral health settings including medical outpatient settings.[63]

Posttraumatic Stress Disorder Symptoms Symptoms of PTSD were assessed using the PTSD Symptom Scale (PSS).[64] The PSS includes 17 items that assess the severity of PTSD symptoms according to DSM-IV-TR criteria.[65] Both the interview and self-report versions have satisfactory internal consistency, good concurrent validity, and high test-retest reliability.[64] Clients are asked to mark whether or not they have experienced or witnessed any of the traumatic events or situations listed (e.g., a serious accident, fire or explosion, sexual assault by a stranger, etc.) in order to establish trauma history. After picking the most traumatic event experienced, clients are asked to rate on a scale from 0 (Not at all) to 3 (Almost always) a list of symptoms, for example "having bad dreams or nightmares about the traumatic event." Items are summed to get a score and higher scores indicate greater severity.[65]

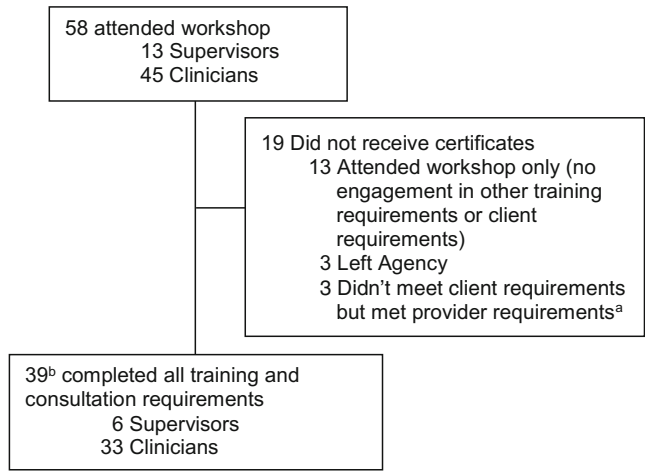
Plan of Analysis

Descriptive statistics for all study variables were examined using SPSS (Version 19).[66] Change in perceived skill in CETA over time for those providers who completed all training and consultation requirements were examined using one-way repeated measures ANOVA. Alpha was set at $p < .05$. Missing data was rare for skills and the item mean was substituted when this occurred.

Qualitative responses regarding the appropriateness of CETA were content analyzed using consensus coding by the first and second author. Codes selected a priori included generic

Figure 2

Toolkit participants who completed consultation requirements. The consultation requirements included the following: (1) attend at least 8 of the 12 consultation calls, (2) enter at least six sessions into toolkit, and (3) enter at least 2 measures into toolkit. Superscript letter a: missing one additional follow-up measure, one missing six sessions (had four sessions). Superscript letter b: one of the providers who completed the requirements did not complete the 6-month time point



characteristics of cognitive-behavioral therapy (e.g., having structured agendas and homework), and the ten CETA components covered in the training (see Table 4). There were 14 original codes; however, because it was mentioned frequently, whether CETA worked well or not with clients based on race/ethnicity/client spoken language was added. Each of these 15 codes, or aspects of delivering CETA, were characterized as "mentioned" or "not mentioned" by the provider. The frequencies of codes mentioned were examined for those providers who completed all required components of the training and consultation. Consensus coding was done to enhance trustworthiness; however, as this coding was completed by two coders (XX and YY) simultaneously and not independently, metrics of interrater reliability were not calculated.

Pre-post change in client symptoms was examined on posttraumatic stress and depression using paired samples *t* tests. Alpha was set at $p < .05$ and effect sizes calculated with Cohen's *d*.[25, 38] Due to missing data on post-treatment symptom assessments (posttraumatic stress $n = 9$ and depression $n = 1$), the final analytic sample for clients with posttraumatic stress and depression clinical targets were $n = 30$ and $n = 12$, respectively.

Results

CETA Self-Reported Competence

Providers who completed the training and consultation requirements reported an improvement in their self-reported competence in delivering CETA, $F(2, 74) = 24.83$, $p < .01$, partial eta squared = .40 (see Table 3 and Fig. 1). The mean increased from pre-training to post-workshop, representing self-reported skills in the moderate range at both time-points.

Feasibility of Implementing CETA

Thirty-nine (67%) providers completed the requirements for training and consultation. Most often providers who did not complete the requirements attended the workshop only ($n = 13$). Three providers left the agency during the training and consultation period. Three providers completed all requirements except for engaging clients in CETA for six sessions, including pre- and post-symptom assessments. All agencies started out with supervisor participation. Six of the eight agencies who had clinicians that completed all training requirements also had supervisors who completed all of the requirements. Demographic characteristics did not vary by those who attended training, completed all three of the skill evaluation surveys, completed all requirements for the training and consultation, and by number of clients provided CETA (see Table 1 and Fig. 2). Anecdotally, CETA consultants noted that providers from agencies that do not routinely provide, or have the structure for session-based CBT (e.g., inpatient care, high client turnover), struggled more to sustain participation in the training and consultation.

Seventy-two percent of providers who completed the training and consultation requirements delivered CETA to one client. One provider delivered CETA to five clients, three delivered CETA to three clients, and seven providers delivered CETA to two clients. The overall mean number of sessions for the clients was 11.1 (range 6–25). Broken up by clinical target, the overall mean number of sessions for treating PTSD was 11.5 (range 7–25), and the overall mean number of sessions for treating depression was 10.2 (range 6–16).

Appropriateness of CETA

Of the 38 providers who completed all training and consultation requirements and responded to the post-consultation survey, 33 responded to the open-ended question regarding what worked well with clients. Responses had an average of 1.30 codes ($SD = .83$). The most commonly reported

code for what worked well with clients was the CBT model connection between thoughts, feelings, and behaviors. For example, one provider noted, "Making thoughts more tangible and connecting them with emotions [worked well with clients]." The second most common code was the CBT model structure (e.g., agenda setting, homework; see Table 4). An example of a quote from a provider is, "The structure—having worksheets and goal directed organized plan [worked well with clients]." One provider noted that CETA worked well with Latinx clients.

Thirty-one providers answered the question about what did not work well with clients. Responses had an average of .90 codes ($SD = .75$). The most common code for what did not work well with clients was the CBT model structure (e.g., agenda setting, homework). An example quote from a provider is, "High caseloads make weekly appointments nearly impossible." Another provider noted "I think with some clients everything worked well, others struggled to get concepts of cognitive coping and/or didn't do homework- distracted by crisis of the week or had cognitive issues." The second most common code was imaginal exposure. One provider noted, "Engaging in trauma exposure due to the setting our clients are in and the stressors that exist for them daily (homelessness, MH issues/symptoms, court involvement, substance use, etc.) [did not work well]." When it was coded that CETA did not work well based on client race/ethnicity/language, this was due to a language barrier ($n = 4$), see Table 4. Although the response did not fit into one of the codes, one provider reported CETA did not work well with clients without a primary PTSD target. Specifically, the provider "…found that both the treatment and my skills in administering it were

Table 4

Frequency of codes for responses to qualitative questions about what worked/did not work well with patients when delivering CETA ($N = 38$)

	Worked well[a]		Did not work well[b]	
Code	N	%	N	%
CETA components				
Engagement	1	2.6%	–	–
Psychoeducation	1	2.6%	–	–
Cognitive coping	4	10.5%	–	–
Anxiety management strategies/relaxation	–		–	–
Behavioral activation	2	5.3%	1	2.6%
In vivo exposure	–		2	5.3%
Imaginal gradual exposure	5	13.2%	6	15.8%
Cognitive restructuring	6	15.8%	–	–
Problem-solving	–	–	–	–
Safety	–	–	–	–
Flexibility of transdiagnostic approach	2	5.3%	–	–
Client race/ethnicity/language	1	2.6%	4	10.5%
CBT aspects				
Standardized symptom assessments	2	5.3%	–	–
CBT model: structure (e.g., agendas, homework)	7	18.4%	9	23.7%
CBT model: thoughts-feelings-behaviors	11	28.9%	2	5.3%

Codes based on frequency of mention by provider participant. *CETA* common elements treatment approach
One provider who completed all training requirements did not complete the final survey and is excluded from the analysis

[a]Thirty-three clinicians responded to the question. There were an average 1.30, ($SD = .83$) codes per response

[b]Thirty-one clinicians responded to the question. There were an average .93, ($SD = .73$) codes per response

Table 5
Client outcomes

	N[a]	Scale range	Baseline		Follow-up		t test		d[b]	95% CI
			Mean	SD	Mean	SD	t (df)	p		
Posttraumatic stress disorder (PSS)	30	0–3	2.03	.58	1.31	.78	5.18 (29)	< .01*	0.95	(0.43, 0.99)
Depression (PHQ-9)	12	0–3	1.92	.84	1.07	.75	3.94 (11)	< .01*	1.14	(0.37, 1.31)

SD standard deviation, *CI* confidence interval, *PSS* PTSD symptom scale, *PHQ-9* patient health questionnaire
Outcomes are listed for clients seen by providers who met the CETA requirements
*$p < .01$
[a]Missing data for $N = 14$ (from the total of 56 clients) due to clinical targets of anxiety ($N = 3$), behavior ($N = 1$), incomplete pre and post PHQ-9 for clinical target of depression ($N = 1$), and incomplete pre and post PSS for clinical target of PTSD ($N = 9$)
[b]Cohen's *d*

better with patients who actively identified trauma as a problem in their lives AND who were tired of the restrictions that the trauma's shadow had placed on their lives."

Client Outcomes

Clients with a clinical target of posttraumatic stress ($n = 30$) demonstrated a statistically significant decrease in PSS scores, $t\ (29) = 5.18$, $p < .01$, Cohen's $d = .95$, two-tailed, with a 95% confidence interval ranging from 0.43 to 0.99. The 12 clients with a clinical target of depression demonstrated a statistically significant decrease in PHQ-9 scores, $t\ (11) = 3.94$, $p < .01$, Cohen's $d = 1.14$, two-tailed, with a 95% confidence interval ranging from 0.37 to 1.31 (see Table 5).

Discussion

This study is the first of its kind to assess the feasibility of implementing CETA, a modular transdiagnostic cognitive-behavioral therapy developed for LIMC, within the USA. Findings support the contention that CETA would be a good fit for implementation in the US PBH system. Findings support feasibility of engaging clinicians and supervisors in workshop training, case-based consultation, and CETA delivery with agency clients. Further, initial outcome data is promising for achieving the large effects from trials of CETA in two culturally diverse LMICs.[44, 49]

Sixty-seven percent of providers completed the CETA workshop training and consultation requirements. This rate compares favorably to other evidence-based psychotherapy implementation efforts in child PBH settings in Washington State (see Dorsey et al. 2016; 6-month completion rate of 63%).[38] This rate is lower, however, than observed in the Beck Community Initiative roll-out of cognitive therapy,[31] which may be accounted for, in part, by the funding and policy driving evidence-based psychotherapy implementation in the city of Philadelphia. This data was not tracked, but it is likely that provider turnover contributed to the 33% who did not complete the training and consultation of CETA, and based on anecdotal information from CETA consultants, it may be that some agencies had a service delivery model that presented challenges for accommodating the need for a weekly 50-min session (e.g., predominantly serving homeless clients).

The benefit of a transdiagnostic approach is apparent with the observed training completion rates. Organizational and system leaders (e.g., state officials) need more efficient methods for training and supporting staff in providing evidence-based psychotherapies, due to fiscal challenges

created by *adding* requirements of these initiatives to existing "financial distress."[19] With CETA, nearly two-thirds of the trainees who participated were now trained to treat the most common mental health conditions and trained in how to address comorbidity in their caseloads. The threat to system or organizational buy-in for evidence-based psychotherapy initiatives is easy to imagine if providers were required to be trained, including the generally recommended several months of case-based consultation, and supervised in three separate therapies (i.e., specific to PTSD, depression, and anxiety), with the associated costs and lost clinical services delivery time while clinicians are in training or receiving consultation.

On average, providers were able to engage clients beyond the six sessions documented for training purposes. The mean number of sessions for clients was 11.10 (range 6–25), which may also provide an indication of how many CETA sessions are needed to obtain symptom reduction. The average observed number of sessions fits with the expected session length for CETA delivered in two LMICs[44, 49] and was fewer on average than the number of sessions observed in another transdiagnostic approach, the Unified Protocol (clients were allotted a maximum of 18 sessions and averaged 15.26 sessions for treatment with an $SD = 4.60$).[33]

Findings suggest the CETA training positively impacted providers' perception of competence in delivering CETA, increasing from an average rating of "moderate" to just above "moderate" at the post-workshop and post-consultation assessments. Relatively high levels of pre-training skill ratings may reflect that participants commonly held Master's degrees. While providers were not asked about their history of training or delivery in CBT, it is likely that some providers had prior CBT training and experience, which may have resulted in providers being more open to, ready to absorb the CETA model, and build CETA-specific skills.[67] Although self-reported versus objectively rated skills competence are known to be modestly correlated,[68, 69] provider perception may be important as an indicator of confidence or self-efficacy in delivering the therapy,[69] a construct known to be critical in behavior change.[70] Although there is a dearth of research on the role of provider confidence in delivering an evidence-based psychotherapy, a wealth of research on related constructs like therapy allegiance (i.e., investigator belief in a particular treatment)[71] and the ability to deliver a well-articulated and convincing therapeutic rationale[72] would suggest therapist confidence is a critical part of treatment effectiveness. Future research could improve understanding of the relation between perceived skill, confidence, and therapist behavior change after training, and client outcomes.

The qualitative data collected corroborates findings for feasibility and provides support that CETA is appropriate for the clients served. More spontaneous responses to the question about "what worked well" in delivering CETA than the question asking, "what did not work well" were observed. Providers' responses to what worked well indicated particular support for the CBT model in general and the structured approach to this kind of treatment. It was rare for providers to spontaneously mention CETA's flexibility (i.e., modules are selected based on client symptom presentation and preferences), although, as a transdiagnostic treatment, this is believed to be a potential strength of CETA. Although some providers noted that the CBT structure worked well, it was also observed with a similar frequency that providers identified the CBT structure as something that did not work well with clients. The idea that providers see the CBT structure as both a positive and a negative in working with clients in PBH is consistent with previous research.[73] For instance, Wiltsey-Stirman and colleagues (2012)[73] observed that some providers who struggled with the structure of CBT mentioned concern that the structure impedes patient-centeredness. However, in other cases, providers noted that when working with clients who had a lot of psychosocial challenges, agenda setting allowed the provider to structure the session and facilitate organization.

Considerations for Future Research

Considerations should be made related to study limitations, and suggestions for the use of more robust evaluation methods that could be utilized within funding constraints common among real-world evaluations are presented. To gain more insight into the agency context and CETA

implementation barriers and facilitators, a future evaluation could include asking senior organizational leaders as well as clinicians and supervisors to complete a brief needs assessment survey, capturing data on clinician readiness to learn CETA (e.g., prior experience with CBT or other evidence-based psychotherapies) and the agency's readiness to absorb regular weekly psychotherapy into their current service schedule. Although requiring more resources, to obtain a deeper understanding of the barriers and facilitators of CETA implementation, future evaluations may also incorporate focus groups or key informant interviews that utilize a rapid ethnographic approach, relying on the analysis of the notes taken during the interviews or focus groups rather on qualitative transcriptions.[74] In addition, incorporating questions that require participants to apply knowledge gained in evaluation surveys could provide additional insight into skill-building. Harnessing data collected routinely in electronic medical records, such as therapy encounter notes, may provide insight into whether providers are following the CETA model.

Observing the impact of CETA on client symptoms is important for future evaluations; however, utilizing randomized methods to assess causality can be impracticable in a real-world evaluation context. If evaluation resources are available, quasi-experimental approaches that balance internal and external validity and can speak to causal inference are available.[75] For instance, to study the impact of roll-out of CETA across many agencies, a stepped-wedge design, which randomizes at the agency level and allows all agencies to implement the intervention within the study time-frame, may be desirable.[76]

One way to strengthen causal inference with limited demand on resources would be to utilize existing client symptom assessment data available in the electronic medical record. Some agencies may be routinely collecting client symptoms as part of a measurement-based care approach to case management prior to implementing an evidence-based psychotherapy like CETA. This data could be used as a baseline assessment of client symptoms with which to compare post-CETA symptoms. Additionally, pre-CETA electronic medical record information about clients could provide insight into which clients are being selected for CETA and whether prior levels of engagement with the agency impact client CETA completion.

Limitations

This pilot evaluation was carried out using data collected routinely as part of the training and consultation and was limited in scope. Routine data collection relied on trainer and consultant report of attendance and participant report on required components of the training and consultation that had to be completed for participants to receive a certificate of completion. If participants were not likely to or were not motivated to receive a certificate, they would be less likely to participate in evaluation surveys and enter client data into the toolkit.

Data on reasons for non-attendance and dropout were not available, either as documented by trainers or participant self-report. Gathering data from all participants, including those who have dropped out, requires additional resources to find and encourage reporting on reasons for dropout. It may be easier to gather this data from the onsite supervisor, particularly as to whether the dropout was due to turnover. Lacking data on reasons for dropout limits the understanding of what may be serving as particular barriers to implementation within a given agency.

Open-ended questions to assess providers' perceptions of what did and did not work well with delivering CETA with their clients provide preliminary insight into how appropriate CETA is for PBH clients. Some providers elected not to respond to this question, omitting what may be important additional perspectives. Using open-ended questions did not allow for follow-up probing of responses or in-depth exploration of what specifically it is about each aspect of delivering CETA that was useful/not useful. Additionally, we did not include methods to enhance rigor or trustworthiness of the data, beyond having each provider response coded simultaneously by two researchers. Collecting more in-depth information about providers' experiences through focus

groups or qualitative interviews and engaging multiple coders in independent coding to reliability would enhance the rigor as well as what can be learned about barriers and facilitators of CETA delivery with PBH clients.

In terms of training outcomes, the evaluation relied on clinician and supervisor self-report and self-perceived competence in delivering CETA. Objective assessments of training outcomes, such as ratings of adherence or fidelity to CETA made by trained observers, would strengthen arguments for the benefit and feasibility of the implementation effort. Unfortunately, such ratings are expensive and resource intensive to make. More feasible evaluation methods might be for trainers and consultants to document their observation of participant skills practice[55] and the quality of case presentations on consultation calls, as used in the WA State CBT+ initiative. Notably, participants did not fastidiously utilize the toolkit to document session content, although this was encouraged. Charting notes in addition to what must be contained in electronic medical records can be overly burdensome for busy providers.

This study observed client symptom outcomes and provider ability to track this information as an indicator of the feasibility of implementing CETA in PBH. While promising, the client outcome data observed cannot speak to causality and did not account for clustering of clients within providers or agencies. Although the findings from this study support the feasibility of engaging clinicians and supervisors in the initial training in CETA, the ongoing sustainment of CETA among agencies past this time period is unknown. Supervisors were asked to be a part of the training and consultation, given how important ongoing supervision is known to be in the sustainment of high-quality evidence-based psychotherapy delivery.[57] The content or process of supervision was not tracked in this study; although, it is known that these supervisors had no prior experience with CETA, given that was a new innovation introduced in Washington State PBH at that time. Therefore, it is unlikely that onsite agency supervision accounts for much of the observed change in provider perception of competence in delivering CETA. Ongoing evaluation of the agency's efforts to sustain CETA past the initial training in CETA will be critical for supporting its implementation in PBH. A variety of issues would need to be addressed, including the known variability in availability of supervision to support evidence-based psychotherapy in PBH[77, 78] and high provider turnover commonly observed in these settings.[79]

Implications for Behavioral Health

Findings from this pilot evaluation provide initial data demonstrating that CETA is a promising treatment approach to providing evidence-based psychotherapy for PTSD, depression, and/or anxiety in US PBH settings. The modular transdiagnostic approach and reduced training burden of CETA as compared to training in multiple EBPs for specific diagnoses has great potential to reach[53] the population of clients served in PBH who would benefit from treatment.[53] Findings have implications for other providers in Washington State, particularly in a state-policy context that prioritizes evidence-based practices (e.g., state legislation, specific billing codes, tracking of organizational use) but also has budget restrictions and, like many states, provides few resources for implementation and evaluation. If more providers can receive training and consultation in CETA, which would equip them to approach most individuals on their caseload, it may be possible to achieve greater population reach at lower cost.

While the study findings are encouraging for other agencies and providers in Washington State to adopt CETA, attention must also be paid to ongoing CETA sustainment. Agencies are making large investments by having clinicians and supervisors trained in CETA, which may go unrealized if ongoing supervision is not provided once the expert consultation ends. Organizations may need to focus on supporting their workplace-based supervisors in developing CETA expertise, an approach taken in the WA State CBT+ initiative, where supervisors have a monthly support call and access to a yearly training.[38] Additionally, as with any other evidence-based psychotherapy, the

promise of CETA is compromised when trained providers turn over or are not able to regularly engage clients in weekly psychotherapy due to caseload demands or the existing service delivery model. Given the significant cost to clients and the larger society associated with untreated PTSD, depression, and anxiety,[23] continued research to establish the effectiveness of CETA in US PBH and to identify opportunities to enhance both its implementation and sustainment is warranted.

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Compliance with Ethical Standards

Conflict of Interest The fourth and fifth authors are CETA developers; both have been paid to provide CETA trainings. The remaining authors declare no conflicts of interest.

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