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Training addiction counselors to implement CBT for depression

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Abstract

Many clients in publicly funded substance abuse treatment programs suffer from depression yet lack access to effective mental health treatment. This study sought to examine whether addiction counselors could be effectively trained to deliver group CBT for depression and to ascertain client perceptions of the treatment. Five counselors were trained in the therapy and treated 113 clients with depression symptoms. Counselors demonstrated high fidelity to the therapy and client perceptions of the therapy were positive. Our results suggest that training addiction counselors to deliver group CBT for depression is a promising integrated treatment approach for co-occurring depression and substance disorders.

Keywords

cognitive behavioral therapy; depression; substance abuse; co-occurring disorders; training

Substance use and depressive disorders frequently occur together (Grant et al., 2004), but individuals with co-occurring substance abuse and depressive disorders (COD) rarely receive treatment for both disorders (Clark, Power, Le Fauve, & Lopez, 2008; Katherine E. Watkins, Burnam, Kung, & Paddock, 2001). Although treatment guidelines recommend treating both disorders concurrently and regardless of setting, studies suggest that there are significant barriers to obtaining treatment for mental illness in the public sector (Harris & Edlund, 2005; McGovern, Xie, Segal, Siembab, & Drake, 2006). The lack of access to effective mental health treatment has significant consequences. Individuals with COD experience greater impairment and worse treatment outcomes than individuals with only one of these disorders (Grella & Stein, 2006) and treatment costs are substantially higher for those with COD as compared to a single disorder (Druss & Rosenheck, 1999). Innovative approaches are needed to increase access and address the significant unmet need among individuals with these co-occurring disorders.

One potential mechanism to improve access to mental health treatment for COD clients is to train addiction counselors to deliver evidence-based mental health care. Given the limited resources in publicly funded settings to treat both disorders (Friedmann, Alexander, & D'Aunno, 1999; Friedmann, Alexander, Jin, & D'Aunno, 1999; Grella & Hser, 1997), a group intervention that can be delivered by addiction counselors may be an effective way to increase access to mental health care for clients with COD.

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Group cognitive behavioral therapy (CBT) has been shown to be an effective treatment for depression (R. F. Muñoz & Mendelson, 2005; Oei & Dingle, 2008) and there is a small literature that implies that counselors without post-baccalaureate mental health education can be effectively trained to deliver CBT for depression (Bright, Baker, & Neimeyer, 1999; Thompson, Gallagher, Nies, & Epstein, 1983). Related to this point, the literature suggests that addiction counselors can deliver CBT for substance use with appropriate training and supervision (Morgenstern, Morgan, McCrady, Keller, & Carroll, 2001). There is less evidence about whether these counselors, typically with little or no mental health training, can be effectively trained to deliver CBT for depression. In a recent systematic review of CBT for depression or anxiety, (Montgomery, Kunik, Wilson, Stanley, & Weiss, 2010) identified only four studies with sufficient methodological rigor and concluded that professionals without post-baccalaureate mental health training can effectively deliver CBT to patients with depressive symptoms. However, none of these studies examined addiction counselors and three of the four studies predated the mid 1980's.

A recent literature review regarding the dissemination of evidence-based manual-guided behavioral therapies suggested that effective delivery of such treatments requires organizational support and extensive technical assistance in the form of both didactic and experiential training, distribution of a treatment manual, and ongoing clinical supervision that involves close monitoring with feedback on actual clinical performance (Beidas & Kendall, 2010). Although few studies have systematically evaluated the effective dissemination components, the research on CBT suggests that even after implementing a "gold standard" training protocol (i.e., training workshop, treatment manual followed by ongoing supervision), many therapists may still struggle to reach acceptable levels of *treatment fidelity* (Rakovshik & McManus, 2010; Sholomskas et al., 2005), that is the degree to which a treatment is implemented as intended (Perepletchikova & Kazdin, 2005). In fact, Beidas and Kendall (2010) concluded that the current dissemination format of a workshop, manual and brief supervision does not support adequate levels of treatment proficiency. Rather, the literature suggests ongoing organizational support in the form of an interactive clinical supervision model that allows for performance feedback is critical to obtaining and sustaining treatment fidelity.

Consistent with stage-based approaches to treatment development (Rounsaville, Carroll, & Onken, 2001), this study sought to examine whether addiction counselors could be effectively trained to deliver group CBT for depression and ascertain client perceptions of the treatment. First, we evaluated whether counselors could lead the therapy with high fidelity following an extensive training (i.e., as defined as greater than 137 hours by Rakovshik & McManus, 2010) and on-going supervision model. Consistent with Perepletchikova and Kazdin (2005), we assessed two components of treatment fidelity: 1) adherence to the treatment and 2) competence in treatment delivery. Adherence refers to whether the addiction counselors covered key aspects of the treatment, while competence refers to how well they delivered the treatment (Perepletchikova & Kazdin, 2005). We assessed treatment fidelity over a two-and-a-half year delivery period to evaluate whether fidelity was maintained over the long-term, and whether it changed with time. More specifically, we hypothesized that treatment fidelity would improve over time given increased experience with delivering the therapy and continued performance feedback. Second, we evaluated whether the therapy as delivered by addiction counselors was acceptable to clients by examining client perceptions of the therapy and the relationships between perceptions, group therapy attendance and self-perceived improvement. Both therapist and client experiences are relevant to assessing treatment feasibility (Rounsaville, et al., 2001). These evaluations serve to enhance our long-term goal to increase access to effective mental health care for clients in addiction treatment.

Methods

These data were collected as part of the Building Recovery by Improving Goals, Habits and Thoughts (BRIGHT) study, a quasi-experimental community-based effectiveness trial that developed and evaluated a group CBT for depression in addiction treatment clients (K.E. Watkins et al., In press).

Treatment Manual

We adapted an existing group CBT for depression that has demonstrated effectiveness in a variety of settings and populations (Miranda et al., 2003; R. Muñoz, Ippen, Rao, Le, & Dwyer, 2000; R. F. Muñoz & Mendelson, 2005; K. B. Wells et al., 2000), but that had not been implemented in publicly funded addiction treatment settings. Development of the adapted treatment manual was guided by two primary goals: 1) to increase the likelihood that addiction counselors could implement the therapy with fidelity and 2) to improve the existing therapy's acceptability and appropriateness for clients in residential addiction treatment.

We conducted the adaptation of the treatment manual through a nine-month formative assessment process in which iterative feedback from multiple stakeholders was incorporated. These stakeholders included CBT experts, substance use addiction and COD experts, addiction treatment center administrators, counselors, and clients. The formative assessment process included manual revisions, followed by implementing the group in two outpatient addiction treatment settings, at which point additional revisions were made to the manual. Adaptations to increase the likelihood that addiction counselors could successfully deliver the therapy included adding "Leader Tips" boxes to the group leader treatment manuals, which included specific guidance on session timing, sample language to introduce exercises, and ways to increase client engagement and participation. Adaptations to the therapy to increase acceptability to addiction treatment clients included adding specific examples of thoughts and behaviors by individuals when using or in recovery, and adding a fourth module to the therapy that focused on the connections between substance abuse and mood.

The resulting BRIGHT therapy consisted of 16 two-hour sessions divided into four modules each focusing on a different target: Thoughts, Activities, People, and Substance Abuse. The group is designed to be semi-open, meaning that new group members can enter at the beginning of each of the four modules. Intervention materials include group leader manuals, client workbooks, and fidelity monitoring tools (described below), and are available from the first author.

Counselors

All training and group implementation was conducted at Behavioral Health Services, one of the largest publicly funded addiction treatment providers in Los Angeles County. In consultation with the agency's administrators and supervisors, we interviewed and selected five addiction counselors to be trained in delivering the therapy. We provided information about the training opportunity at an organization-wide staff meeting. Counselors could self-identify or were identified by their supervisors. We specified three minimal requirements for participation. First, counselors needed to express interest in learning CBT. Second, they had to have been employed as a counselor at the agency for at least one year, indicating some familiarity in working with addiction treatment clients and providing some indication that they had a commitment to remain employed at the treatment site for the duration of the training and group implementation. Third, counselors needed to be willing to co-lead the group with another addiction counselor and be open to leading a structured, manualized

therapy. To increase the likelihood that counselors were representative of usual care counselors, advanced degrees or specialized training in mental health were not required.

We trained five addiction counselors. Four counselors were female and one was male, and reported a variety of racial/ethnic backgrounds (two were Black, two were Hispanic, one was White). At the time they were selected for training, counselors had an average of 4.2 years of experience as addiction counselors and did not have advanced degrees. Three counselors were in recovery from drugs or alcohol and four had completed an alcohol and drug addiction certification program (i.e., CADAC) from the state of California. All of the counselors reported knowing about CBT, but only one had received any prior training and supervision in CBT. This counselor had participated in an earlier pilot of a related intervention with our study team.

Counselor Training

Counselors received two days of didactic training on 1) understanding depression and its relationship to substance abuse, 2) assessing depression symptoms, 3) group management skills, 4) understanding the CBT model for depression, and 5) introducing specific CBT exercises from the manuals. The didactic training was delivered on two consecutive full days and consisted of alternating between lecturing, demonstrations of techniques, and experiential exercises (e.g., role plays) in smaller groups. In planning the didactic training, we had a specific goal to balance didactic material with interactivity to maintain counselor interest, allow them to actively practice the skills being learned, and enable the trainers to observe their initial grasp of the concepts presented. Next, counselors then co-led one 'practice round' of the 16-session therapy in the outpatient setting where they were employed. While we delivered the therapy twice per week (i.e., as an 8-week treatment) in the residential setting, during the practice round the counselors led the group once per week (i.e., as a 16-session treatment). This allowed counselors additional time to prepare for each session, as they were only delivering one session per week. Following this 'practice round,' counselors received a one-day booster training that addressed more challenging issues that came up during the initial implementation (e.g., talking with clients about suicidal ideation). Counselors then delivered the therapy in a residential addiction treatment setting as part of the clinical trial for two and a half years. Two of the five counselors co-led the group at one time; counselors rotated every four months. Counselor pairs were planned in advanced to ensure all counselors led the group with each other, although we allowed flexibility in this plan to account for the competing scheduling commitments that the counselors experienced.

Group Clinical Supervision

Counselors received weekly group supervision throughout the training and implementation period. Supervision was provided by one of two licensed clinical psychologists with experience in CBT and COD treatment. All counselors attended the group supervision sessions, even though only two of the counselors were leading the group at any one time. The weekly supervision sessions were initially two hours during the training and implementation period, but were shortened to 90 minutes as counselors became more experienced and less supervision was required. Supervision sessions were conducted primarily in person at the agency's administrative headquarters with only a few of the sessions conducted by phone because of the challenge involved in reviewing audio tapes of sessions during phone supervision.

The weekly supervision sessions focused on three tasks: reviewing individual client progress, reviewing the previous session(s) led, including review of portions of the audiotapes, and preparation for the upcoming session(s). Reviewing client progress was facilitated by regular administration (i.e., every other session) of the Patient Health

Questionnaire (PHQ) (Spitzer, Kroenke, & Williams, 1999). Supervision time was used to provide feedback to counselors on ways to improve their adherence and competence ratings. Initial supervision sessions also focused heavily on preparing group leaders to lead the upcoming one or two sessions. As session preparation became less necessary, this allowed for additional time for session review and deeper understanding of CBT concepts.

Patients

We enrolled clients admitted to one of Behavioral Health Service's four residential addiction treatment centers located in Los Angeles County between August 2006 and January 2009. Study inclusion criteria were: (a) able to read and speak English, (b) a Patient Health Questionnaire (Spitzer, et al., 1999) score of five or greater at two weeks post-residential treatment entry, and (c) a score of 17 or greater on the Beck Depression Inventory-II (Beck, Steer, & Brown, 1996) 1 to 14 days after the first depression screening, indicative of persistent moderate to severe depressive symptoms. Study exclusion criteria included a positive screen for: (a) self-reported bipolar disorder (Sloan, Kivlahan, & Saxon, 2000), (b) schizophrenia (using one item from the Healthcare for Communities (HCC) Psychoticism screener; (K. Wells, Sturm, & Burnam, 2001)), and (c) cognitive impairment (as assessed by the Short Blessed Scale Exam; (Dennis, White, Titus, & Unsicker, 2006)), or being a federal prisoner (as we did not have permission from Federal Parole Board to include these clients).

Over the course of the study enrollment period, 1,262 clients were assessed for depression at two weeks post-treatment entry. Approximately twenty-five percent of those clients met study criteria and 299 were enrolled into the study. We assigned 140 clients to the intervention condition. Fifty percent of the intervention clients were male and the sample was ethnically diverse (24% African American, 37% Caucasian, 28% Hispanic, 11% other/mixed). The average age was 35.3 (SD = 10.1) years old.

Our study sample showed symptoms related to both mental and substance use problems as assessed at the baseline interview 3-4 weeks after treatment entry. Mean BDI-II scores were in the clinically severe range (M = 32.7; SD = 8.9; range = 18-59) and almost half the sample (48.54%) met criteria for a past 12-month depressive disorder using the Composite International Diagnostic Interview, version 2.1 (Walters, Kessler, Nelson, & Mroczek, 1998). Mental health functioning (SF-12; (Ware Jr., Kosinski, & Keller, 1996)) scores were almost two standard deviations below the population norm (31.7; SD = 10.9; range = 8.2-55.1). The most commonly reported problem substance was amphetamines (36.8%), followed by cocaine (20.4%), alcohol (15.4%), and heroin (10.4%). Sixty-seven percent of the sample reported 12-month alcohol use that met criteria for a probable disorder (AUDIT-C; (Dawson, Grant, Stinson, & Zhou, 2005)).

Measures

We assessed counselor fidelity to the treatment manuals over the course of the two-and-a-half year implementation period. For patients who attended the BRIGHT group, we assessed patient perceptions including helpfulness of the group, therapeutic alliance with group leaders, and perceived improvement. We also collected BRIGHT group attendance data.

Fidelity measures—We evaluated counselor fidelity to the treatment manuals using adherence and competence measures developed for the BRIGHT therapy (Hepner, Stern, Paddock, Osilla, & Watkins, in preparation). The adherence measure was adapted from (Jaycox et al., 2009)) for use in this study. The number of adherence items varied by session and ranged from 10 to 18, depending on the number of exercises and new topics introduced. The adherence measure was specific to each session and required ratings on a 4-point scale (ranging from 0 to 3) of how adequately group leaders covered each session element. A

score of 2 or higher indicated adequate adherence to each session element. An adherence score was computed for each session by dividing the number of items (reflecting individual session elements) that were adequately covered (scored 2 or 3) by the total number of items coded for that session. The number of items scored for each session ranged from 10-15 and followed the session outline (e.g., reviewing between session homework activities, introduction of the connection between thoughts and mood). Seven of the adherence items were scored for all sessions, while the remaining items assessed unique elements of individual sessions. Adherence was considered high if 85% of session elements were adequately covered.

The competence measure was adapted from the Cognitive Therapy Adherence and Competence Scale (Barber, Liese, & Abrams, 2003). Adaptations were guided by the unique characteristics of the BRIGHT therapy that differed from typical individual CBT. Specifically, the BRIGHT therapy is a highly structured, group therapy in which the session agendas are largely predetermined (rather than setting the agenda with an individual at the beginning of the session) and counselors must focus on the needs of many group members (rather than a single individual). Further, the BRIGHT therapy is a modular therapy in which portions of the CBT model are focused on for a series of sessions (i.e., Thoughts module focuses on cognitive restructuring, while deemphasizing behavioral interventions). We also added items to assess group dynamics. The 14 items were rated on a 7-point scale (0-6), with an average score of 4.0 indicating competent CBT delivery, similar to the original Cognitive Therapy Adherence and Competence Scale (Barber, et al., 2003). The same competence items were applied across all coded sessions.

All sessions were digitally recorded and 33% of sessions (N=80) were randomly selected for fidelity coding by at least one trained rater. Three raters (two MA-level, one PhD-level) received 16 hours of training, including reading the treatment manuals, coding 4 sessions independently of the other raters, and then meeting to discuss their scores after each session. Interrater reliability estimates were generated using the 13% of sessions (N=33) that we selected for double coding.

Although the fidelity measures were adapted from existing measures, they were adapted for the BRIGHT treatment; therefore, we provide a more extensive description of the inter-rater agreement for the measures. The inter-rater agreement was examined by calculating the proportion of observed agreement between raters, p_0. Since agreement can be expected by chance alone, the kappa statistic as a measure of inter-rater reliability was also examined, with values closer to 1, indicating greater reliability of rater assessments. However, kappa has some limitations. First, kappa can be relatively low if the proportion of positive responses is extreme (very high or very low) across raters. The intracluster correlation (ICC), which is often used to assess reliability for scaled or continuous items, can similarly be misleading when data have a restricted range. An example of restricted range would be when all therapists deliver a therapy with high adherence and competence. Second, kappa can be relatively high if the raters disagree on the overall proportion of positive assessments. Therefore, in addition to kappa, the prevalence adjusted bias adjusted kappa (PABAK) was evaluated, along with the prevalence index (PI) and the bias index (BI), to help understand differences between the kappa and PABAK reliability measures (Byrt, Bishop, & Carlin, 1993). The PI is the difference between the probabilities of raters making positive versus negative assessments and addresses the first type of bias due to having an extreme proportion of responses across raters. The BI is the difference between raters with respect to the proportion of positive assessments and addresses the second source of bias mentioned above. To calculate PABAK, the adherence and competence measures must be dichotomized, reflecting whether each item was delivered with adherence (i.e., the item score was a 2 or 3) or competence (i.e., the item score >= 4). The level of inter-rater

agreement is reported for each dichotomized item, with the following agreement levels based on guidelines published for kappa: poor (<0.41), moderate (0.41-0.60), substantial (0.61-0.80), and almost perfect agreement (0.81-1.00) (Landis & Koch, 1977). We also examined ICCs for continuous items, but do not present that information here since the information conveyed by the ICCs was similar to that conveyed by kappa.

Reliability is reported in Table 1 for 15 adherence items, along with the number of double-coded sessions since not all items repeat across all sessions. Note that there are up to 18 adherence items for some sessions. These additional 1 to 3 items relate to the New Topics unique to each of the 16 sessions and we did not have adequate double coded sessions on all the New Topics to report results on these remaining items. The overall adherence score, indicating whether 85% of session elements were adherent, showed substantial agreement (PABAK=0.682), despite a large observed agreement of p_0=0.84, though the large prevalence index (PI=0.788) explains the difference between kappa and PABAK. Based on PABAK, seven adherence items had a substantial agreement; six items had almost perfect agreement; and two items ('how have you been feeling' and 'key messages') had poor agreement. Given that PABAK indicated substantial rater agreement for the overall adherence score; all items were included in the overall adherence measure for analyses despite two items having poor reliability. The results for three items with small numbers of double codings (fewer than 10) should be interpreted with caution. An overall competence score was estimated as the mean of the 7-point competence items. For estimating PABAK, this score was dichotomized to reflect whether the average continuous competence score was 4.0 or greater, indicating competent delivery of the therapy. Its inter-rater agreement was p_0=0.777 (Table 1). The kappa statistic was very low in comparison (κ=0.079), due to a difference of PI=0.537 between the proportion of 'yes' and 'no' responses between both raters. There was very small bias (BI=0.019) between raters in the proportion of items each coded as 'yes.' After accounting for these biases, the PABAK score of 0.577 indicated moderate agreement, so no items were removed from the overall competence score prior to conducting analyses. The component dichotomous competence items are also presented in Table 1, with poor agreement on four items, moderate agreement for four items, substantial agreement on 1 item, and almost perfect agreement for five of the 14 items.

Patient perception measures—Data were collected from clients who were assigned to the 16-session CBT group and who participated in a post-treatment follow-up interview (approximately 3 months after study enrollment). Clients were asked to report on their perceptions of helpfulness of the group using items developed for this therapy. The 13 items were rated on a 5-point scale ranging from 'strongly agree' to 'strongly disagree.' This measure demonstrated an internal consistency reliability of 0.80. Item content is included in Table 2. In addition, we assessed therapeutic alliance using the 12-item Working Alliance Inventory (WAI; (Busseri & Tyler, 2003; Adam O. Horvath & Greenberg, 1989)), which is a general measure of rapport and trust in the therapeutic relationship that has been found to be consistently positively related to client outcomes irrespective of type of therapy approach (A. O. Horvath & Luborsky, 1993). Because the WAI measure has typically been applied to individual therapy, items were modified to refer to 'group leaders.' The WAI demonstrated an internal consistency reliability of 0.95. Clients also reported on how their life had improved since starting the BRIGHT group ("Looking back on what your life was like just before you started the group CBT/Project BRIGHT group and how it is now. How much would you say your life has improved?"). Response options were on a 5-point scale ranging from 'Not at all improved' to 'Extremely improved.' Data were also collected on the number of group CBT sessions attended.

Analyses

We used descriptive statistics to describe adherence and competence over the course of the implementation period. To evaluate whether adherence and competence varied by treatment module (i.e., Thoughts, Activities, People, and Substance Abuse modules), we fit random-effects analysis of variance (ANOVA) models to the overall adherence and competence scores for each session. To account for the non-independence of scores across sessions due to counselors co-leading multiple sessions, a multiple membership modeling approach was taken, which involved adding random counselor effects to the basic ANOVA model and estimating the session-specific counselor effect for a particular session as an average of the random counselor effects for those counselors who led that session (Browne, Goldstein, & Rasbash, 2001; Carey, 2000). We obtain p-values adjusted for multiple hypothesis testing when identifying statistically significant pairwise differences between particular modules using the Tukey-Kramer p-value (Kramer, 1956) to control Type 1 error. We used the same approach to evaluate whether adherence and competence varied over time, but conducted only one pairwise test of whether the first 25% of sessions significantly differed from the last 25% of sessions since that is the most relevant comparison over time. We use descriptive statistics to describe client perceptions of the CBT group, followed by correlational analyses to evaluate the relationships between client perception variables and group attendance.

Results

Each counselor co-led an average of 98 sessions over the course of the implementation period (range: 46-149 sessions). Of the 140 clients who were assigned to the CBT group, 120 participated in the 3-month follow-up interview for a response rate of 86%. Analyses focused on the 113 clients who attended at least one session. The mean number of sessions attended was 11.9 sessions (SD = 4.7) out of the 16 sessions and 79% attended at least half of the 16 sessions.

Counselor Fidelity

The average adherence rate was 94% across all coded sessions (N=80), suggesting high adherence to the treatment. Most of the sessions (84%) had adherence rates over 85%. The average competence score across all coded sessions was 4.1. This is higher than the 4.0 cut point and indicates counselors were competently delivering CBT (Barber, et al., 2003). Most of the sessions (68%) had competence scores over 4.0. Adherence and competence to the treatment did not significantly vary by treatment module (p=0.3100 and p=0.1859, respectively; Table 3). There were no significant pairwise differences between modules with respect to average adherence or competence scores. Though time of session delivery (i.e., first 25% of sessions, middle 50% of sessions, last 25% of session) was not overall significantly associated with the average competence or average adherence scores (Table 3), adherence was significantly higher in the last 25% sessions versus the first 25% (p < .05).

Patient Perceptions

The percent of clients who endorsed 'strongly agree' on each item assessing the perceived helpfulness of the group is presented in Table 2. The majority of clients reported that they 'strongly agree' that they could use the information from the group in their daily life, the group leaders were helpful, the exercises conducted in the group were helpful, the client workbooks were easy to follow, the CBT group was helpful in improving their mood, and they could understand the information presented in group. Slightly fewer clients thought that the between session practice (i.e., homework) was helpful, the 4-session modules were the right length, and that the 2-hour sessions were the right length.

The mean total score on the WAI (mean = 51.96, SD = 9.6), suggested positive perceptions of therapeutic alliance with the group leaders. The majority of clients (74%) reported that their life had improved 'extremely' or 'quite a bit.'

As expected, clients' perception of the helpfulness of group and perceptions of therapeutic alliance were significantly correlated ($r = 0.40$, $p<.001$). Perceptions of the helpfulness of the group were not associated with client attendance ($r = -0.03$, *ns*), but were associated with perceived improvement ($r = 0.38$, $p<.001$). Therapeutic alliance was significantly associated with both client attendance ($r = 0.21$, $p<.05$) and perceived improvement ($r = 0.61$, $p<.001$). Finally, client attendance was significantly associated with perceived improvement ($r = 0.27$, $p<.01$).

Discussion

Summary

In this study we demonstrated that addiction counselors can be trained to lead a group CBT for depression with high treatment fidelity. Further, the data collected from clients suggest that the therapy was acceptable. Retention rates were high, with almost 80% of the sample receiving at least half of the treatment. Clients also perceived the treatment to be helpful, and these perceptions were associated with perceived improvement. Our results indicate that training addiction treatment counselors to deliver group CBT for depression is a promising approach to increasing access to effective depression care for individuals receiving addiction treatment.

Individuals with co-occurring depression and substance abuse represent a group with worse prognosis compared to individuals with a single diagnosis and have high levels of unmet need. Traditionally, CBT for depression has been provided by professionals such as psychologists or social workers. Addiction counselors, who typically do not have advanced degrees, have not yet been widely employed as providers of CBT for depression. These counselors may represent an untapped resource in increasing access to effective depression care for addiction treatment clients. While mental health settings may rely more on individual therapy, addiction treatment settings primarily deliver group interventions, making this treatment particularly feasible for transporting it to typical addiction treatment settings. Addiction counselors do not typically have training in assessing and treating psychiatric disorders, such as depression, but they often bring group management skills and knowledge of the unique challenges of working with addiction treatment clients. Our training model capitalized on these existing skills and expanded the addiction counselors' expertise to include understanding and treating depression. Though leading group CBT for depression may be more challenging than facilitating individual CBT for depression because of the complexities of attending to the different group members and managing group dynamics, this study demonstrated that addiction counselors can be equipped to deliver group CBT without first learning how to deliver CBT to individuals.

This study is the first to evaluate addiction counselors' fidelity to group CBT for depression over a two and a half year implementation period. Sessions delivered later in the implementation period showed better adherence to the therapy compared with sessions earlier in the implementation period. Though the omnibus test of association of time and adherence was borderline significant (p=0.0788), it is interesting to note that the overall association between time of session delivery and average adherence suggest that addiction counselors may have improved their adherence to the intervention over time either through increased practice and/or ongoing feedback provided by clinical supervision. As such, more research is needed to understand the level of training and supervision that is necessary to sustain adequate levels of fidelity over time in these delivery settings.

Limitations

A few limitations should be considered. First, the coding tools used to assess fidelity to the therapy were developed specifically for the BRIGHT intervention. Although they were adapted from previously validated tools using input from experts in the therapy, the tools have not yet been formally validated. It was necessary to develop fidelity tools specifically suited for this therapy, given that it departs from traditional individual CBT in a number of important ways (i.e., group therapy, highly structured, and modular). Some individual items had poorer inter-rater agreement, so future work is needed to address whether these items perform better for other settings (e.g., when additional variability is observed) or must be modified. In addition, the fidelity ratings focused specifically on CBT and did not assess the presence of other types of therapy (e.g., 12-step, AA/NA). In other words, the fidelity tools do not address treatment differentiation (Perepletchikova & Kazdin, 2005). Future research using a larger counselor sample and broader variation in the therapy is needed to inform the validation of the fidelity tools used in this study.

Secondly, CBT supervisors provided ongoing weekly group supervision throughout the implementation of the therapy. To address the feasibility of the treatment being offered in typical addiction treatment settings, we sought to train counselors that were representative of treatment staff in these settings. However, the amount and duration of the training and supervision in this study was likely beyond the range that typical addiction treatment settings support (Miller, Sorensen, Selzer, & Brigham, 2006; Roche, Todd, & O'Connor, 2007). It is also important to note the context in which we delivered training and supervision. The training was conducted as part of a clinical trial, where our goal was to deliver the therapy with high fidelity. Thus, resources were devoted to support high quality implementation. For example, CBT supervisors received ongoing information from study fidelity ratings, as well as from conducting audio tape review during supervision sessions. Therefore, our comprehensive training and supervision model represents a limitation to generalizing to addiction treatment settings. Further work should address how our training model can be modified to be more efficient and fit within the resources that are typical of addiction treatment settings. For example, an online training module of this group CBT for depression is currently under development and would greatly reduce the cost of conducting the initial didactic training. It is also important to note that the formative assessment team made adaptations to the manuals guided in part by the possibility that future implementations of the therapy would likely have fewer training and supervision resources. The result of this work was a highly structured manual that provided step-by-step instructions in leading each session that counselors referred to as they led the group. The purpose of the highly structured format of the group leader manuals that we developed was to provide support to implement the therapy with high fidelity, in the absence of our full training model.

Finally, our study collected data from just five counselors drawn from across a single, multi-site publicly funded addiction treatment provider in a large metropolitan area, which limits our ability to examine how counselor characteristics might affect treatment fidelity. Although we aimed to select typical addiction counselors, we required that they had been working at the treatment center for at least one year. This allowed us to increase the likelihood that the counselors had basic counseling skills and familiarity in working with addiction treatment clients. The one-year tenure requirement also suggested that the counselor may plan to stay for a longer period of time. Addiction treatment centers typically experience high counselor turnover (McLellan, Carise, & Kleber, 2003), so inclusion of the one-year tenure requirement may also limit our generalizability. However, given that treating co-occurring depression in clients with substance use disorders may represent a more advanced set of skills and more intensive training, having some basic requirements may increase the likelihood of successful implementation. It will be important in future

studies to demonstrate that addiction counselors from different settings (e.g., agencies and regions of the country) are able to conduct the treatment with fidelity.

Lessons Learned

Previous work has suggested that ongoing supervision is essential in order for clinicians to competently lead a new therapy approach (Beidas & Kendall, 2010; Sholomskas, et al., 2005). We implemented a comprehensive program including training and ongoing supervision that was likely essential for achieving the positive results presented in this study. Training addiction counselors in group CBT for depression is not without significant challenges. Organization support, primarily in the form of conveying value for evidence-based practices and providing counselor release time from their regular job duties for CBT training and supervision, was very important. Learning this therapy approach requires significant time and effort that cannot simply be added to counselors' usual responsibilities. Because of this, treatment centers may opt to train only selected counselors to serve as co-occurring disorders specialists rather than training all treatment staff.

In addition, we found that the CBT supervisors needed to modify their approach to address the unique training needs of addiction counselors. In our experience, addiction counselors often have less experience in critically reflecting on their own performance (e.g., listening to audio tapes of their sessions, identifying areas for improvement) when compared to licensed mental health providers. We found that counselors experienced some anxiety when asked to reflect on their performance and a tendency to only report positive aspects of the session. Moreover, conducting supervision in a group setting allows for observations and ideas for alternative approaches to come from other counselors or peers, which can be less intimidating than feedback from a licensed mental health professional.

We also learned that CBT supervisors needed to assist addiction counselors to redefine their scope of practice to include the treatment of depressive symptoms. Addiction counselors are typically instructed to only treat addiction problems, and refer all clients with possible mental health problems to mental health specialty care. Our training program focused on developing competencies in assessing depressive symptoms, providing feedback to clients on their level of depressive symptoms, assessing suicidality, and adjusting their treatment approach to successfully treat clients with depressive symptoms. As such, increasing counselors' skills and confidence in treating depression was an important first step in our training and supervision.

Conclusions

Dissemination of evidence-based psychotherapy approaches, such as CBT for depression, will require innovative approaches that seek to minimize both implementation barriers for treatment sites and access barriers for clients in need. Training addiction treatment counselors to provide group CBT for depression is one promising approach to addressing the needs of clients with co-occurring depression and substance abuse. Additional work is needed to reduce the costs associated with implementing evidence based psychotherapies and to increase the incentives for addiction treatment programs to provide these services for these clients.

Acknowledgments

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Table 1

Inter-rater agreement and reliability of dichotomized competence and adherence items

Item	N	Observed Agreement (Po)	Kappa (κ)	Prevalence Index (PI)	Bias Index (BI)	PABAK
Overall Adherence	**33**	**0.841**	**0.207**	**0.788**	**−0.117**	**0.682**
Purpose/Outline	32	0.875	0.448	0.750	−0.125	0.750
How Have You Been Feeling	16	0.563	−0.273	0.563	0.063	0.125
Group Rules	10	0.900	0.000	0.900	1.00	0.800
Introductions	8	1.000	*	1.000	0.000	1.000
What is Depression	10	1.000	*	1.000	0.000	1.000
What is CBT	10	1.000	*	1.000	0.000	1.000
Review Practice	32	0.938	−0.032	0.938	0.000	0.875
Review Last Session	32	0.875	−0.049	0.875	−0.625	0.750
New Topics§						
How Does CBT Treat Depression	10	1.000	*	1.000	0.000	1.000
Review Module	8	0.875	0.600	0.625	0.125	0.750
Goodbye	3	1.000	*	1.000	0.000	1.000
Key Messages	33	0.667	−0.052	0.606	−0.030	0.333
Practice	33	0.848	0.200	0.788	−0.030	0.697
Feedback	30	0.818	0.667	0.758	0.061	0.636
Look Ahead	30	0.867	0.268	0.800	−0.067	0.733
Overall Competence	**33**	**0.777**	**0.079**	**0.537**	**0.019**	**0.577**
Bridge from Previous Visit	33	0.576	0.000	0.394	0.061	0.152
Reviewing Previous Homework	32	0.667	−0.177	0.688	−0.063	0.375
Assigning New Homework	32	0.576	0.080	0.344	−0.031	0.188
Capsule Summaries	33	0.758	0.478	−0.273	−0.061	0.515
Patient Summary and Feedback	32	0.636	0.178	−0.273	−0.061	0.515
Focus/Structure (Time Management)	33	0.636	0.227	−0.273	−0.121	0.273

Item	N	Observed Agreement (Po)	Kappa (κ)	Prevalence Index (PI)	Bias Index (BI)	PABAK
Socialization to CBT	33	0.788	−0.055	0.788	0.152	0.576
Model						
Warmth/Genuineness/ Congruence	33	0.970	0.000	0.970	0.030	0.939
Convey Empathy	33	0.909	−0.042	0.909	0.030	0.818
Collaboration	33	0.879	−0.048	0.879	0.061	0.758
Guided Discovery	33	0.758	0.114	0.697	0.182	0.515
Group Motivation	33	0.909	−0.042	0.909	0.030	0.818
Group Participation	33	0.909	−0.042	0.909	0.030	0.818
Group Comprehension	33	0.909	0.353	0.849	0.030	0.818

*
kappa is not defined when PI=1 and BI=0.

§Each session includes 1 to 3 New Topics that are unique to each session, so estimates are not provided.

Table 2

Client perceptions of helpfulness of group CBT for depression

Item Content %	Strongly Agree
I could use information from the group in my daily life.	86.4
The Thoughts Module taught me how my thoughts and mood are connected. [‡]	84.4
The exercises we did in group together were helpful. [‡]	82.7
The group leaders were helpful.	85.5
The group member guidebooks were easy to use and follow.	81.8
The Activities Module taught me about the connection between activities I do and my mood. [‡]	80.4
The Substance Abuse Module taught me about the connection between use of alcohol or substances and my mood. [‡]	78.6
The People Module taught me about the connection between my contacts with others and my mood. [‡]	77.9
Going to the CBT group was helpful in improving my mood.	77.3
I could understand the information from the group.	77.3
The homework projects I did outside of group were helpful.	71.4
The group modules (4 sessions on each topic) were the right length.	64.6
The group session (2 hours) were the right length.	49.1
Mean of items (SD)	4.59 (.70)

[‡] For these items, clients who reported they did not complete any of the exercises or did not attend the relevant module were excluded. Ns range from 103 to 113.

Table 3

Adherence and competence by treatment module and time

		Average Adherence			Average Competence		
	N	Mean	SD	P-Value	Mean	SD	P-Value
Module				0.3100[1]			0.1859[1]
Thoughts	25	0.936	0.09		4.217	0.33	
Activities	22	0.964	0.06		4.218	0.35	
People	17	0.913	0.12		3.950	0.35	
Substance Abuse	16	0.951	0.06		4.022	0.36	
Early vs. Late				0.0788			0.3224
First 25% of Sessions	20	0.891	0.12		4.214	0.38	
Middle 50% of Sessions	40	0.950	0.05		4.000	0.29	
Last 25% of Sessions	20	0.976	0.05		4.004	0.29	

[1] Based on F-test for overall significance of module or time as a predictor of average adherence or competence in a random-effects ANOVA model.