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Patterns of practice in community mental health treatment of adult depression

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Abstract

Objective—Community mental health therapists often endorse an eclectic orientation, but few studies reveal how therapists utilize elements of evidence-based psychotherapies. This study aimed to characterize treatment as usual patterns of practice among therapists treating depressed adults in community mental health settings.

Method—Therapists ($N = 165$) from the USA's largest not-for-profit provider of community-based mental health services completed surveys assessing their demographics and practice element use with depressed adult clients. Specifically, therapists indicated whether they utilized each of 45 unique practice elements from the following evidence-based psychotherapies: Acceptance and Commitment Therapy, Behavioral Activation, Brief Psychodynamic Therapy, Cognitive Behavioral Therapy (CBT), Interpersonal Therapy, Mindfulness-Based CBT, Problem-Solving Therapy, and Self-Control Therapy. Principal component analysis was employed to identify practice patterns.

Results—The principal component analysis included 31 practice elements and revealed a three-factor model with distinct patterns of practice that did not align with traditional evidence-based practice approaches, including: (i) Planning, Practice, and Monitoring; (ii) Cognitive, Didactic, and Interpersonal; and (iii) Between Session Activities.

Conclusions—Therapist-reported practice patterns confirmed an eclectic approach that brought together elements from theoretically distinct evidence-based psychotherapies. Future research is

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Clinical or methodological significance of this article: This study confirmed previous reports that community mental health therapists adopt an eclectic approach, combining elements from disparate theoretical orientations.

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needed to explore how these patterns of practice relate to client outcomes to inform focused training and/or de-implementation efforts.

Keywords

depression; community mental health; practice elements; treatment as usual

The American Psychological Association Division 12: Society of Clinical Psychology currently lists six evidence-based practices (EBPs) with “strong research support” (or “well-established per Chambless & Hollon, 1998) and seven EBPs with “modest research support” (or “probably efficacious” per Chambless & Hollon, 1998) for use in the treatment of adult depression (Strunk, 2013). Despite documented efficacy, EBPs for adult depression remain significantly underutilized in community mental health settings and depression remains among the world’s leading causes of disease burden (Ferrari et al., 2013). In an effort to bridge this science-practice gap, researchers have attempted to support community agencies in EBP implementation (e.g., Karlin et al., 2012; Simons et al., 2010). There is emerging evidence documenting the effectiveness of implementation strategies such as workshop trainings plus consultation (Beidas, Edmunds, Marcus, & Kendall, 2012); however, therapists in community settings struggle to implement EBPs with fidelity (Powell, Proctor, & Glass, 2013). Moreover, sustainment is limited due to influences from the context (e.g., significant time constraints applied to psychotherapy encounters), the EBP itself, implementation processes, and organizational capacity (Wiltsey Stirman et al., 2012).

More recently, implementation of common evidence-based practice elements (e.g., exposure, psychoeducation, cognitive restructuring) has been prioritized in lieu of standard manualized, multifaceted EBP protocols (Chorpita, Daleiden, & Weisz, 2005). One such treatment approach provides an alternative pathway for implementing EBPs that allows for a more flexible, individualized, yet structured and evidence-based treatment. In fact, the use of a modularized, guided practice elements approach (i.e., Modular Approach to Therapy for Children with Anxiety, Depression, or Conduct Problems [MATCH]) outperformed standard manualized treatment and treatment as usual in a multi-site randomized clinical trial (Weisz et al., 2012). Also in an effort to directly address some of the aforementioned threats to EBP sustainment, another approach supports the focused implementation of a smaller set of atheoretical practice elements, such as measurement-based care (Scott & Lewis, 2015), to enhance treatment as usual (Lewis, Scott, et al., 2015). Both approaches (modularized and smaller set of practice elements) appear to better align with community therapist practice. Research suggests that community therapists naturally adopt and implement elements of EBPs in their clinical practice (Orimoto, Higa-McMillan, Mueller, & Daleiden, 2012) and favor modularized to manualized approaches (Borntrager, Chorpita, Higa-McMillan, & Weisz, 2009).

However, research exploring the use of practice elements or modular approaches to therapy has primarily focused on the treatment of youth, with the notable exception of the Common Elements Treatment Approach developed for low-income global health settings (Murray et al., 2014). Examining the natural application and integration of practice elements in usual care is a critical but understudied area that may have implications for (de)implementation

(Prasad & Ioannidis, 2014). However, to our knowledge, few studies have characterized treatment as usual for depressed adults with respect to therapist-reported practice element use (Garland, Bickman, & Chorpita, 2010). Hepner, Greenwood, Azocar, Miranda, and Burnam (2010) offer the only published account to date that describes psychotherapeutic techniques (from Cognitive Behavioral Therapy, Interpersonal Therapy, and Dynamic Therapy) as they manifest in usual care in a large managed mental health care organization, revealing a substantial portion of therapists (i.e., 21%) who endorsed multiple theoretical orientations (or an eclectic approach). Additional accounts are needed that include a wider array of psychotherapeutic practice elements including EBPs with “strong” and “modest” research support and that explore therapist patterns of practice beyond self-reported orientation.

This paper utilizes data from a baseline needs assessment survey conducted with therapists at the USA’s largest not-for-profit community-based mental health service agencies. Descriptive statistics of therapist familiarity with eight EBPs and their use of practice element data have been previously published in a commentary (Lewis, Ayer, & Marti, 2015) that highlighted the sheer preponderance of practice elements reportedly in use when treating depressed adults—an average of 17.1 elements were endorsed for use at least 75% of the time. Although this summary data provides a snapshot of treatment as usual, important questions remain regarding whether and how therapists integrate use of practice elements within and across theoretical orientations. This paper builds off of this summary data to determine whether practice patterns emerge based on therapist self-report of practice element use.

Methods

Procedure

A battery of surveys was generated as part of a large multi-phase community-partnered implementation project (Lewis, Scott, et al., 2015). A university-based Institutional Review Board approved all study procedures. The survey battery was embedded within the community mental health center’s internal news for all therapists to access, meaning that it was posted on an internal message board that is available on the home screen of each therapist’s computer.

Participants

At the time of survey distribution, the community-based mental healthcare center employed 409 therapists to provide individual and group psychological services across 100+ clinic sites in the Midwestern part of the United States. A total of 165 of a possible 409 therapists completed the survey, representing a response rate of 40.3%, which is a typical response rate among mental health service providers (Hawley, Cook, & Jensen-Doss, 2009). Ninety-six percent of therapists (96%) held Master’s degrees and two percent were Ph.D.-level therapists. All therapists had an average weekly caseload of 40+ clients. Consistent with national base rates (Wang et al., 2005), depression was one of the most common presenting problems, reflecting nearly 40% of their clientele’s primary diagnosis.

Measurement

Demographic information—Participating therapists completed a very brief demographic questionnaire to provide information about the primary population with whom they work, licensure status, and years of experience in providing mental health care.

Practice elements—Therapists also reported their use of individual practice elements to obtain a clearer picture of treatment as usual with adult depressed clients. Practice elements were derived from a list of eight EBPs generated by the Society for Clinical Psychology (Strunk, 2013) including: Acceptance and Commitment Therapy, Behavioral Activation, Brief Psychodynamic Therapy, Cognitive Behavioral Therapy, Interpersonal Therapy, Mindfulness-Based CBT, Problem-Solving Therapy, and Self-Control Therapy. A review and content analysis of articles, manuals, and websites pertaining to each of the 8 EBPs revealed 45 core theorized practice elements (see Table I). Therapists responded to the following by selecting yes or no for each of 45 binary practice element variables: “Which practice elements do you use 75% of the time in your clinical work with **depressed** clients?”

Statistical Methods

We conducted a principal components analysis (PCA) to identify related practice elements. PCA was used in light of the fact that data reduction was the primary goal of the analysis (i.e., identifying similar items that could be grouped together for assessment purposes). The PCA was implemented using the R psych package (Revelle, 2015). The PCA was performed on a tetrachoric correlation matrix of the binary items. Prior to analysis, we examined contingency tables between each item pair to identify empty cells (i.e., there are no observations in one or more of the possible combinations in a 2×2 contingency table) which precludes their use in a factor analysis of binary data; this led to the removal of three low-frequency practice elements: Biofeedback, Graded Task Assignment, and Reward Planning.

In the first step of the PCA, we implemented a parallel analysis (PA) based on the tetrachoric correlation matrix (Garrido, Abad, & Ponsoda, 2016) to determine the number of factors underlying the data. The PA indicated that the data could support as many as nine principal components. However, examination of a scree plot of eigenvalues plotted with PA simulated data revealed that the majority of observed and simulated eigenvalues were very similar (<0.50). Many of observed eigenvalues retained in strict adherence to the PA were very close to one (i.e., the variance of a single variable), suggesting that strict adherence to the PA would result in over-extraction in the PCA. Furthermore, we determined that our sample size was in a reasonable range to recover underlying factors based on a simulation study by de Winter, Dodou, and Wieringa (2009). Their result indicated that three factors with loading = .60 can be recovered with a sample size of 71–78 and three factors with loading = .40 can be recovered with a sample size of 186–234 for pools of 24–48 items. Thus, following the advice from Garrido et al. (2016) whereby statistical methods should be used as aids and not rules in determining the number of factors, we evaluated other model considerations.

The scree plot showed breaks at three- and five-component models which were evaluated further with rotated factor solutions. The models described here were fit with a promax

rotation. Given that both the three- and five-factor PCAs were reasonable models, we evaluated item loading in both models following recommendations from Pett, Lackey, & Sullivan (2003) to eliminate cross-loaded items. We selected the item with the smallest difference between loadings and eliminated it from the model and repeated this process until all items had a loading of .40 on a single component (Schönrock-Adema, Heijne-Penninga, van Hell, & Cohen-Schotanus, 2009). The number of items discarded in the five-factor model and the lack of factor stability in the pruning process indicated that model over-extracted items and we thus selected the three-factor model as the better representation of the underlying relationships in practice elements.

Results

Participants

Two-thirds of participating therapists were currently licensed. Approximately 40% of therapists indicated that they worked primarily with adults, 47.2% with both children and adults, and 12.4% worked primarily with children and adolescents.

Principal Component Analysis

After trimming items in the PCA model, the same items were fit with an oblimin rotation which produced an identical component structure as the orthogonal model presented in Table I. Factor themes were identified and named based on the loadings of practice elements and represented patterns of practice including: (i) Planning, Practice, and Monitoring; (ii) Cognitive, Didactic, and Interpersonal; and (iii) Between Session Activities. Communalities ranged from .27 to .64 with a median value of .46. Correlations between the three factors in the final model when obliquely rotated were .48 between Planning, Practice, & Monitoring and Cognitive, Didactic, & Interpersonal; .35 between Planning, Practice, & Monitoring and Between Session Activities, and .23 between Cognitive, Didactic, & Interpersonal and Between Session Activities.

Discussion

Patterns of Practice in Usual Care

To our knowledge, this is the first account of usual care therapist practice patterns with adult client populations in community-based mental healthcare settings. The only previous report of mental healthcare service provision as usual with depressed adult populations examined therapist self-report of psychotherapeutic techniques according to three prescribed orientations: Cognitive Behavioral Therapy, Interpersonal Therapy, and Brief Dynamic Therapy (Hepner et al., 2010). Hepner et al. (2010) demonstrated validity of their practice element measure with therapist-reported theoretical orientation, but they did not unpack the substantive group of therapists who endorsed multiple theoretical orientations as is common in community mental health. In the current study sample, PCA results indicated three practice patterns were employed by therapists with their depressed adult clients: (i) Planning, Practice, and Monitoring; (ii) Cognitive, Didactic, and Interpersonal; and (iii) Between Session Activities (see Table I).

A close examination of the items mapping onto the three factors suggests some conceptual/theoretical consistency within factors. For instance, the first factor—Planning, Practice, and Monitoring—includes elements primarily associated with a Cognitive Behavioral Therapy (CBT) tradition, albeit minus the cognitive components. Said differently, there are several structural and behavioral components from CBT within this factor (e.g., agenda setting, problem-solving, role play). Simultaneously, the majority of the elements that loaded onto this factor represent core components of Behavioral Activation, with the exception of taking an interpersonal inventory. And although one could argue this element would be a useful strategy for identifying interpersonal opportunities for increasing reward (which is consistent with the principle behind Behavioral Activation), taking an interpersonal inventory is an Interpersonal Therapy specific practice element, and not a core component of either Cognitive Behavioral Therapy or Behavioral Activation. Thus, there is clear use of practice elements from across EBP within this first factor, consistent with an eclectic approach.

It may still be appropriate to bring together the elements observed in factor 1; however, without data to support their integration it is difficult to tell whether the clinical outcomes may be enhanced or undermined. Conversely, there is some evidence to suggest that this practice pattern may be unfortunately limited with respect to its clinical utility without the addition of other critical practice elements, such as homework. Specifically, Simons et al. (2012) found homework to be a key ingredient in CBT for depression, but homework assignment did not load onto factor 1 in the current study. This finding diverges from previous work by Shaw et al. (1999) who subjected the gold standard CBT competency evaluation tool, the Cognitive Therapy Scale (Young & Beck, 1980), to a PCA and discovered a two-factor solution in which a “structure” factor emerged, containing agenda, pacing, and homework, among research therapists trained to deliver CBT in a clinical trial. This “structure” factor predicted client outcomes in the treatment of depression over and above the Cognitive Behavioral Therapy “skill” elements (e.g., focusing on cognitions, strategy for change; Shaw et al., 1999). There is growing evidence to suggest the importance of homework in predicting client outcomes and that community therapists rarely engage in this practice (e.g., Brookman-Frazee, Taylor, & Garland, 2010; Garland, Brookman-Frazee, et al., 2010; Hepner et al., 2010), thus suggesting that therapist use of the Planning, Practice, and Monitoring factor on its own may not achieve desired client outcomes.

Clinical wisdom suggests that a therapist can successfully use techniques or elements from any therapeutic tradition as long as the approach is guided by a sound case conceptualization, which can serve as a map for treatment. However, although collaborative case conceptualization was an element to which therapists responded in the current study, it did not load among those in factor 1, and it instead emerged in factor 2. Moreover, only 12.1% of therapists endorsed using a case conceptualization with their depressed clients (Lewis, Ayer, et al., 2015). Therefore, it is unclear when, how, and with whom, therapists are using various elements. Outcome monitoring loaded among those elements in factor 1, which is an element that could be considered a compass for treatment, to alert the therapist when she is heading off course. Ideally, case conceptualization and outcome monitoring would be used in tandem, but the pattern of results in the current study suggests that community therapists do little of either (only 24.2% reportedly monitor client outcomes; Lewis, Ayer, et al., 2015). Importantly, more dismantling studies and component analyses

are necessary to support this clinical wisdom and specifically evaluate the integration and separation of practice elements as was observed in the present study.

The second factor, labeled Cognitive, Didactic, and Interpersonal, was the most theoretically diverse of the three factors that emerged, including elements of Acceptance and Commitment Therapy, Brief Psychodynamic Therapy, Cognitive Behavioral Therapy, and Interpersonal Therapy. That is, the elements within this factor cut across psychotherapy traditions that are often viewed as divergent. For instance, therapist practice element endorsement patterns indicated that those who attended to core relationships also engaged in core belief work, used didactic persuasion, considered past experiences' influence on functioning, and used interpersonal transference. In EBPs such as Psychodynamic Therapy, the cognitive work focuses on the acceptance and understanding of the client's beliefs. Other EBPs, such as Cognitive Behavioral Therapy, focus on developing more adaptive and accurate beliefs. Although there is a commonality among the elements in factor 2 with respect to attending to the meaning and influence of cognitions and relationships, the strategies used to do this work represent unique and theoretically distinct approaches. The diverse EBPs represented by the practice elements within this factor provide additional evidence for therapists' use of an eclectic set of techniques that cut across theoretical orientations. Interestingly, the major distinction between the first and second factors is their emphasis on "doing" (factor 1) versus "talking" (factor 2). Given the theoretical mismatches found within factor 2, it is possible that these patterns of practice reflect therapist (and/or client) style or preferences (i.e., prefer intellectualizing and discussing over active learning techniques) more than a coherent integrative orientation or theory-guided approach. Unfortunately, we were unable to explore this interpretation given the limits of this current dataset.

Finally, the factor labeled Between Session Activities (factor 3) included behavioral contracting, behavioral experiments, bibliotherapy, homework assignments, and physical exercise. All elements that loaded onto this factor are almost uniformly carried out between clinical sessions. As mentioned above, there is literature that indicates only a small portion of community therapists assign homework to clients despite its critical role in optimizing client outcomes. In the current sample, 52.1% reportedly assigned homework regularly to depressed clients, and only a minority endorsed the other practice elements that loaded on this factor (18.8–41.5% endorsement) (Lewis, Ayer, et al., 2015). Thus, few therapists employ Between Session Activities to promote learning and integration of skills into clients' daily experiences. It will be important for future research to determine what predicts therapist use of this potent but underutilized pattern of practice.

These practice pattern findings are consistent with the results of Creed, Wolk, Feinberg, Evans, and Beck (2016) who discovered that almost one-quarter (23.7%) of therapists providing psychotherapy to adult clients in community mental health settings reported using both Cognitive Behavioral Therapy and non-Cognitive Behavioral Therapy approaches in their work. Similarly, Wilk et al. (2013) found that only 37% of psychotherapists reported using four of the five core cognitive processing therapy elements with their clients in army mental healthcare settings. In a relatively similar setting and population, Hepner et al. (2010) reported variable use of core components of Cognitive Behavioral Therapy, Dynamic

Therapy, and Interpersonal Therapy. That is, this selection of some but not all EBP elements is emerging as a consistent finding that can help characterize eclectic usual care approaches. A more in-depth investigation of these usual care practice patterns, in which clinicians appear to selectively utilize EBP elements and integrate them with other elements from theoretically distinct EBPs, is critical for planning implementation and de-implementation efforts. It is possible that an investigation of this nature may reveal practice-based evidence, in which therapists who are achieving optimal client outcomes are identified to reveal patterns of practice that are workable within the community-based mental healthcare context (Green, 2008).

Despite therapists' reported familiarity with Cognitive Behavioral Therapy, the data suggest that therapists are not prioritizing critical elements (e.g., agenda setting endorsed by 28.5% of therapists) that research indicates are most important for improving client outcomes (Shaw et al., 1999). This finding is not unique to adult depression usual care. That is, similar findings indicate that 60% and 50% of clients seeking community treatment for obsessive-compulsive disorder and eating disorders, respectively, did not actually receive treatment meeting the minimal criteria for adequate Cognitive Behavioral Therapy (Stobie, Taylor, Quigley, Ewing, & Salkovskis, 2007; Waller, Stringer, & Meyer, 2012).

Limitations

There are several limitations of the present study. First, all findings reported herein were derived from therapist self-report measures. Previous research indicates that therapist self-report may reflect an overestimation of actual knowledge and practice (Hurlburt, Garland, Nguyen, & Brookman-Frazee, 2010; Xenakis, Hoyt, Marmar, & Horowitz, 1983). Future research should explore whether observation techniques are necessary for evaluating therapist practice element use. Also, therapists were asked to report on their practice element use with depressed clients, which relies upon therapist diagnosis likely in the absence of any standardized assessment. Second, the sample included a self-selected portion of the therapist population. The abbreviated demographics collected for this study limit our knowledge of how representative our sample might be compared to the broader therapist population. Third, although the method of practice element identification was thoughtfully constructed (based on manual content analysis), it is by no means as rigorous as existing efforts from the child intervention science literature. The work of Chorpita et al.'s (2005) Distillation and Matching model is noteworthy for its rigorous and scientific basis occurring over decades of work. No parallel repository/system exists for the adult intervention science literature; therefore, the list of practice elements and associated factors should be viewed as preliminary. Fourth, to maximize response rates and reduce the time burden of the needs assessment survey, we did not explicitly define the 45 practice elements. It is therefore possible that therapists either did not understand the definition of each (e.g., graded task assignment was only endorsed by two therapists) or the items were interpreted in multiple ways because of ambiguity (e.g., acceptance work cross-loaded on two factors). Despite this limitation, we are confident that the majority of the items were self-explanatory and presented with little ambiguity based on initial pilot testing of the items.

Conclusions

EBPs delivered with fidelity are in limited supply in community mental health settings. The implementation of practice elements in lieu of complex EBP packages may improve sustainability; however, few studies have explored therapist-determined (not evidence-based) use of practice elements in usual care of adult depression. The results presented here suggest that therapists utilize many practice elements with depressed adult clients and that they do so in an eclectic fashion that has not been empirically evaluated. These treatment as usual practice element findings may have important implications for targeted training and de-implementation efforts.

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References

- Beidas RS, Edmunds JM, Marcus SC, Kendall PC. Training and consultation to promote implementation of an empirically supported treatment: A randomized trial. *Psychiatric Services*. 2012; 63(7):660–665. DOI: 10.1176/appi.ps.2011.00401 [PubMed: 22549401]
- Borntrager CF, Chorpita BF, Higa-McMillan C, Weisz JR. Provider attitudes toward evidence-based practices: Are the concerns with the evidence or with the manuals? *Psychiatric Services*. 2009; 60(5):677–681. DOI: 10.1176/appi.ps.60.5.677 [PubMed: 19411357]
- Brookman-Frazee LI, Taylor R, Garland AF. Characterizing community-based mental health services for children with autism spectrum disorders and disruptive behavior problems. *Journal of Autism and Developmental Disorders*. 2010; 40(10):1188–1201. DOI: 10.1007/s10803-010-0976-0 [PubMed: 20204690]
- Chambless DL, Hollon SD. Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*. 1998; 66(1):7–18. [PubMed: 9489259]
- Chorpita BF, Daleiden EL, Weisz JR. Identifying and selecting the common elements of evidence based interventions: A distillation and matching model. *Mental Health Services Research*. 2005; 7(1):5–20. [PubMed: 15832690]
- Creed TA, Wolk CB, Feinberg B, Evans AC, Beck AT. Beyond the label: Relationship between community therapists' self-report of a cognitive behavioral therapy orientation and observed skills. *Administration and Policy in Mental Health and Mental Health Services Research*. 2016; 43(1):36–43. DOI: 10.1007/s10488-014-0618-5 [PubMed: 25491201]
- Ferrari AJ, Charlson FJ, Norman RE, Patten SB, Freedman G, Murray CJ, Whiteford HA. Burden of depressive disorders by country, sex, age, and year: Findings from the global burden of disease study 2010. *PLoS Medicine*. 2013; 10(11):e1001547.doi: 10.1371/journal.pmed.1001547 [PubMed: 24223526]
- Garland AF, Bickman L, Chorpita BF. Change what? identifying quality improvement targets by investigating usual mental health care. *Administration and Policy in Mental Health and Mental Health Services Research*. 2010; 37(1–2):15–26. DOI: 10.1007/s10488-010-0279-y [PubMed: 20177769]
- Garland AF, Brookman-Frazee L, Hurlburt MS, Accurso EC, Zoffness RJ, Haine-Schlagel R, Ganger W. Mental health care for children with disruptive behavior problems: A view inside therapists' offices. *Psychiatric Services*. 2010; 61(8):788–795. DOI: 10.1176/appi.ps.61.8.78810.1176/ps.2010.61.8.788 [PubMed: 20675837]

- Garrido LE, Abad FJ, Ponsoda V. Are fit indices really fit to estimate the number of factors with categorical variables? Some cautionary findings via Monte Carlo simulation. *Psychological Methods*. 2016; 21(1):93–111. DOI: 10.1037/met0000064 [PubMed: 26651983]
- Green LW. Making research relevant: If it is an evidence-based practice, where's the practice-based evidence? *Family Practice*. 2008; 25(Suppl 1):i20–24. DOI: 10.1093/fampra/cmn055 [PubMed: 18794201]
- Hawley KM, Cook JR, Jensen-Doss A. Do non-contingent incentives increase survey response rates among mental health providers? A randomized trial comparison. *Administration and Policy in Mental Health and Mental Health Services Research*. 2009; 36(5):343–348. DOI: 10.1007/s10488-009-0225-z [PubMed: 19421851]
- Hepner KA, Greenwood GL, Azocar F, Miranda J, Burnam MA. Usual care psychotherapy for depression in a large managed behavioral health organization. *Administration and Policy in Mental Health and Mental Health Services Research*. 2010; 37(3):270–278. DOI: 10.1007/s10488-009-0247-6 [PubMed: 19859800]
- Hurlburt MS, Garland AF, Nguyen K, Brookman-Frazee L. Child and family therapy process: Concordance of therapist and observational perspectives. *Administration and Policy in Mental Health and Mental Health Services Research*. 2010; 37(3):230–244. DOI: 10.1007/s10488-009-0251-x [PubMed: 19902347]
- Karlin BE, Brown GK, Trockel M, Cunnning D, Zeiss AM, Taylor CB. National dissemination of cognitive behavioral therapy for depression in the Department of Veterans Affairs health care system: Therapist and patient-level outcomes. *Journal of Consulting and Clinical Psychology*. 2012; 80(5):707–718. DOI: 10.1037/a0029328 [PubMed: 22823859]
- Lewis CC, Ayer DW, Marti CN. Practice elements used with depressed clients by community mental health therapists. *Psychiatric Services*. 2015; 66(9):1003–1004. DOI: 10.1176/appi.ps.201500055 [PubMed: 26323178]
- Lewis CC, Scott K, Marti CN, Marriott BR, Kroenke K, Putz JW, Rutkowski D. Implementing measurement-based care (iMBC) for depression in community mental health: A dynamic cluster randomized trial study protocol. *Implementation Science*. 2015; 10:288.doi: 10.1186/s13012-015-0313-2
- Murray LK, Dorsey S, Haroz E, Lee C, Alsiahy MM, Haydary A, Bolton P. A common elements treatment approach for adult mental health problems in low- and middle-income countries. *Cognitive and Behavioral Practice*. 2014; 21(2):111–123. DOI: 10.1016/j.cbpra.2013.06.005 [PubMed: 25620867]
- Orimoto TE, Higa-McMillan CK, Mueller CW, Daleiden EL. Assessment of therapy practices in community treatment for children and adolescents. *Psychiatric Services*. 2012; 63(4):343–350. DOI: 10.1176/appi.ps.201100129 [PubMed: 22476301]
- Pett MA, Lackey NR, Sullivan JJ. Making sense of factor analysis: The use of factor analysis for instrument development in health care research. Thousand Oaks, CA: Sage; 2003.
- Powell BJ, Proctor EK, Glass JE. A systematic review of strategies for implementing empirically supported mental health interventions. *Research on Social Work Practice*. 2013; 24(2):192–212. DOI: 10.1177/1049731513505778
- Prasad V, Ioannidis JP. Evidence-based de-implementation for contradicted, unproven, and aspiring healthcare practices. *Implementation Science*. 2014; 9(1):556.doi: 10.1186/1748-5908-9-1
- Weisz JR, Chorpita BF, Palinkas LA, Schoenwald SK, Miranda J, Bearman SK, Research Network on Youth Mental Health. Testing standard and modular designs for psychotherapy treating depression, anxiety, and conduct problems in youth: A randomized effectiveness trial. *Archives of General Psychiatry*. 2012; 69(3):274–282. DOI: 10.1001/archgenpsychiatry.2011.147 [PubMed: 22065252]
- Revelle W. Procedures for psychological, psychometric, and personality research. 2015. Retrieved from <http://personality-project.org/r/psych.manual.pdf>
- Schönrock-Adema J, Heijne-Penninga M, van Hell EA, Cohen-Schotanus J. Necessary steps in factor analysis: Enhancing validation studies of educational instruments. The PHEEM applied to clerks as an example. *Medical Teacher*. 2009; 31(6):e226–e232. DOI: 10.1080/01421590802516756 [PubMed: 19089728]

- Scott K, Lewis CC. Using measurement-based care to enhance any treatment. *Cognitive and Behavioral Practice*. 2015; 22(1):49–59. DOI: 10.1016/j.cbpra.2014.01.010 [PubMed: 27330267]
- Shaw BF, Elkin I, Yamaguchi J, Olmsted M, Vallis TM, Dobson KS, Imber SD. Therapist competence ratings in relation to clinical outcome in cognitive therapy of depression. *Journal of Consulting and Clinical Psychology*. 1999; 67(6):837–846. [PubMed: 10596506]
- Simons AD, Marti CN, Rohde P, Lewis CC, Curry J, March J. Does homework “matter” in cognitive behavioral therapy for adolescent depression? *Journal of Cognitive Psychotherapy*. 2012; 26(4): 390–404.
- Simons AD, Padesky CA, Montemmarano J, Lewis CC, Murakami J, Lamb K, Beck AT. Training and dissemination of cognitive behavior therapy for depression in adults: A preliminary examination of therapist competence and client outcomes. *Journal of Consulting and Clinical Psychology*. 2010; 78(5):751–756. DOI: 10.1037/a0020569 [PubMed: 20873911]
- Stobie B, Taylor T, Quigley A, Ewing S, Salkovskis PM. “Contents may vary”: A pilot study of treatment histories of OCD patients. *Behavioural and Cognitive Psychotherapy*. 2007; 35(03):273–282.
- Strunk D. Depression. 2013. Retrieved from <http://www.div12.org/psychological-treatments/disorders/depression/>
- Waller G, Stringer H, Meyer C. What cognitive behavioral techniques do therapists report using when delivering cognitive behavioral therapy for the eating disorders? *Journal of Consulting and Clinical Psychology*. 2012; 80(1):171–175. DOI: 10.1037/a0026559 [PubMed: 22141595]
- Wang PS, Lane M, Olfson M, Pincus HA, Wells KB, Kessler RC. Twelve-month use of mental health services in the United States: Results from the National Comorbidity Survey Replication. *Archives of General Psychiatry*. 2005; 62(6):629–640. DOI: 10.1001/archpsyc.62.6.629 [PubMed: 15939840]
- Wilk JE, West JC, Duffy FF, Herrell RK, Rae DS, Hoge CW. Use of evidence-based treatment for post-traumatic stress disorder in army behavioral healthcare. *Psychiatry: Interpersonal and Biological Processes*. 2013; 76(4):336–348. DOI: 10.1521/psyc.2013.76.4.336
- Wiltsey Stirman S, Kimberly J, Cook N, Calloway A, Castro F, Charns M. The sustainability of new programs and innovations: A review of the empirical literature and recommendations for future research. *Implementation Science*. 2012; 7(1):73–19. DOI: 10.1186/1748-5908-7-17 [PubMed: 22862968]
- de Winter JC, Dodou D, Wieringa PA. Exploratory factor analysis with small sample sizes. *Multivariate Behavioral Research*. 2009; 44(2):147–181. DOI: 10.1080/00273170902794206 [PubMed: 26754265]
- Xenakis SN, Hoyt MF, Marmar CR, Horowitz MJ. Reliability of self-reports by therapists using the therapist action scale. *Psychotherapy: Theory, Research & Practice*. 1983; 20(3):314–320.
- Young J, Beck AT. Cognitive therapy scale: Rating manual. 1980 Unpublished Manuscript.

Table I

Principal component analysis of practice elements.

Practice element	Planning, practice, and monitoring	Cognitive, didactic, and interpersonal	Between Session Activities
Advantages and disadvantages/pros and cons	.52		
Agenda setting	.43		
Behavioral rehearsal/role play	.50		
Goal setting	.80		
Outcome monitoring	.69		
Plan/practice alternative behaviors	.58		
Problem-solving	.68		
Self-monitoring (mood, thoughts)	.68		
Self-reward, self-praise, self-verbalization	.72		
Social skills training	.46		
Soliciting client feedback regarding session	.50		
Taking an interpersonal inventory	.85		
Values identification	.68		
Assertiveness training		.58	
Attending to core relationships		.67	
Cognitive defusion		.59	
Collaborative case conceptualization		.61	
Communication analysis		.63	
Core belief work		.53	
Didactic persuasion		.73	
Disclosing theoretical rationale for treatment		.49	
Distancing from thoughts/beliefs/emotions		.61	
Focusing on past experiences influence on current functioning		.66	
Goal-directed versus mood-dependent behaviors		.46	
Substituting with positive thoughts		.46	
Use of interpersonal transference		.70	
Behavioral contracting			.50
Behavioral experiments			.72
Bibliotherapy			.81
Homework assignment			.67
Physical Exercise			.68
<i>Items excluded due to cross-loading</i>			
Acceptance work			
Activity scheduling/structuring			
Behavior log monitoring			
Cognitive restructuring			
Exposure/targeting avoidance			
Guided imagery/imagery rehearsal			
Insight building			

Practice element	Planning, practice, and monitoring	Cognitive, didactic, and interpersonal	Between Session Activities
Mindfulness training			
Psychoeducation			
Relaxation			
Socratic dialogue/guided discovery			

Note. Reward Planning, Biofeedback, and Graded Task Assignment are not listed in Table I as they were removed after the contingency table analysis.