

In presenting this thesis in partial fulfillment of the requirements for an advanced degree at Idaho State University, I agree that the Library shall make it freely available for inspection. I further state that permission for extensive copying of my thesis for scholarly purposes may be granted by the Dean of the Graduate School, Dean of my academic division, or by the University Librarian. It is understood that any copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Signature _____

Date _____

Changes in Clinical Supervision and Therapist Adherence During Community-Based Learning
Collaboratives: General and Protocol-Specific Practices Relevant to Trauma-Focused Cognitive
Behavioral Therapy

by

Christina Strauch

A thesis

Submitted in partial fulfillment

of the requirements for the degree of

Master of Science in the Department of Psychology

Idaho State University

August 2021

To the Graduate Faculty:

The members of the committee appointed to examine the thesis of Christina Strauch find it satisfactory and recommend that it be accepted.

Samuel Peer,
Major Advisor

Joshua Swift,
Committee Member

Fredi Giesler,
Graduate Faculty Representative

Dedications

I would like to dedicate this thesis to my partner, David, my two chihuahuas, Bean and Taeto, and my absolutely phenomenal cohort, without whom I may have lost my sanity whilst penning this behemoth of a document.

Acknowledgements

I would like to thank my advisor, Dr. Samuel Peer, and committee, Dr. Fredi Giesler and Dr. Joshua Swift, for their support, time, and helpful feedback throughout this process. I could not have accomplished this feat without their guidance. I would also especially like to thank Dr. Rochelle Hanson from the Medical University of South Carolina for allowing me to utilize her dataset for this thesis, whose collection was supported by the Duke Endowment (PI: Benjamin Saunders and Elizabeth Ralston) and NIMH Grant No. R34MH104470 (PI: Rochelle Hanson). The content is solely the responsibility of the author and does not necessarily represent the official views of the Duke Endowment or National Institute of Mental Health.

Table of Contents

Abstract	viii
Chapter 1: Literature Review	1
Child Trauma	2
TF-CBT	5
TF-CBT Phases	6
Phase 1: Stabilization and Skill Building	6
Phase 2: Trauma Narration and Processing	7
Phase 3: Consolidation and Closure	7
TF-CBT Outcomes and Empirical Base	8
Treatment Fidelity	12
Differentiation	13
Competence	14
Adherence	16
Empirical Research on Adherence-Outcome Relations	19
Non-TF-CBT Adherence-Outcome Research	19
TF-CBT-Specific Adherence and Clinical Outcomes	24
Barriers and Methods to Improve General and Specific Adherence	25
Learning Collaboratives (LCs)	29
General Aims, Structure, and Evidence	29
TF-CBT-Specific	30
CBLC	38
Supervision	41
Definition and Goals	42
Formats and Techniques	45
Content and Intensity	47

Empirical Research on Supervision.....	50
Quantity.....	54
Quality.....	55
Format.....	56
Techniques.....	57
Content.....	59
TF-CBT-Specific Supervision.....	62
Present Study and Aims.....	67
Chapter 2: Methods.....	70
Research Context.....	70
Participants.....	70
Procedures.....	71
Measures.....	72
Supervision Quantity.....	72
TF-CBT Supervision Checklist – Therapist-report (TSC-T).....	73
TF-CBT Practices Scale (TPS).....	74
Analytic Plan.....	77
Preliminary Analyses.....	77
Nesting.....	77
Missing Data.....	77
Outliers.....	78
Power Analyses.....	78
Primary Analyses.....	79
Descriptive Statistics.....	79
Inferential Statistics.....	79
Pre- to Post-CBLC Changes in Supervision Quantity.....	79

Pre- to post-CBLC Changes in Supervision Quality and Adherence.....	80
Relation Between Changes in Supervision and Adherence.....	80
Chapter 3: Results	82
Change in Supervision Quantity.....	82
Change in Supervision Quality.....	82
Change in Adherence.....	83
Relation Between Supervision and Adherence.....	84
Chapter 4: Discussion	86
Pre- to Post-CBLC Changes in Supervision.....	86
Supervision Quantity.....	86
Supervision Quality.....	90
Pre to Post-CBLC Changes in Adherence.....	93
Relation Between Supervision and Adherence.....	96
Limitations.....	99
Implications and Future Directions.....	106
Conclusion.....	110
References	112
Appendix A: Tables and Figures	179
Appendix B: TF-CBT Supervision Checklist Therapist Report (TSC-T)	182
Appendix C: Therapist Practices Scale (TPS)	184

Changes in Clinical Supervision and Therapist Adherence During Community-Based Learning Collaboratives: General and Protocol-Specific Practices Relevant to Trauma-Focused Cognitive Behavioral Therapy

Thesis Abstract—Idaho State University (2021)

Prior empirical evidence suggests didactic training alone inadequately sustains community integration of evidence-based treatments (EBTs). Hence, most implementation models, such as Learning Collaboratives (LCs), include expert consultation to promote EBT implementation with fidelity. In contrast, the role in-house supervision plays in EBT adoption—particularly during a LC—remains unknown, though previous findings suggest supervision's effects may vary based on the content or foci of supervision techniques (e.g., EBT-specific versus general supervision practices). Thus, this study has two primary goals: (1) to examine how the quantity (i.e., frequency, duration) and quality of supervision (i.e., EBT-specific or general content) changed before and after a LC, and (2) to examine relations between general and EBT-specific supervision practices and therapists' general as well as protocol-specific adherence. Based on archival data, participants were 139 therapists from 49 agencies involved in one of six LCs conducted as part of a statewide initiative to implement trauma-informed EBTs, with a focus on Trauma-Focused Cognitive Behavioral Therapy (TF-CBT). Participants completed online surveys, pre- and post-LC, to assess factors related potentially to EBT implementation, with a particular focus on TF-CBT. For this study, analyzed measures included: (1) the TF-CBT Supervision Checklist, which assessed therapist-reported receipt of TF-CBT-specific and general supervision practices, and (2) the TF-CBT Practices Scale, which assessed therapist-reported use of TF-CBT-specific and general evidence-based practices with child trauma cases. Therapist-reported frequency and duration of supervision, pre- and post-LC, were analyzed respectively with Wilcoxon and paired samples *t*-tests. Results indicated that the reported frequency of planned supervision did not significantly change, pre- to post-LC ($r = -.04$, $p = .72$); however, frequency of unplanned supervision significantly decreased, pre- post-CBLC ($r = -.24$,

$p = .02$). Reported supervision duration also decreased significantly pre- to post-LC ($d = -0.38$, $p = .006$). Hypothesized pre- to post-LC improvements in supervision content and therapist adherence were analyzed via repeated measures MANOVAs. Findings indicated that, pre- to post-LC, TF-CBT specific supervision content (per therapist-report) increased significantly ($d = 0.56$, $p < .001$); whereas, general supervision content did not ($d = -0.01$, $p = .45$). Similarly, TF-CBT-specific adherence (per therapist-report) increased significantly to a moderate degree, pre- to post-LC ($d = 0.53$, $p < .001$), while general adherence increased to a trivial, nonsignificant degree ($d = 0.15$, $p = .08$). Moreover, multiple multivariate regression results indicated that, when controlling for pre- to post-LC change in general supervision content, increases in TF-CBT-specific supervision content significantly predicted gains in therapist-reported adherence to general ($r = .30$, $p = .006$) and TF-CBT-specific practice elements ($r = .22$, $p = .04$). In contrast, when controlling for LC-related changes in TF-CBT-specific supervision content, increases in general supervision content only significantly predicted improvements in general adherence ($r = .28$, $p = .01$), but not TF-CBT-specific adherence ($r = .16$, $p = .14$). Taken together, results suggest the LC model can significantly improve the quality (i.e., content) of community supervision, particularly EBT-focused content, and that these gains may improve therapists' adherence to LC-targeted LCs. Although preliminary, these findings suggest implementation initiatives should focus on EBT-specific rather than general supervision practices to most effectively improve clinicians' adherence to both EBT-specific and general practice elements.

Keywords: dissemination, implementation, Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), community-based learning collaborative (CBLC), supervision, fidelity, adherence

Chapter 1: Literature Review

Given the high prevalence and costly sequelae of childhood trauma (e.g., Bartlett & Smith, 2019; de Bellis & Zisk, 2014; Dye, 2018; Fang et al., 2012; Finkelhor et al., 2013; Kilpatrick et al., 2003; Lippard & Nemeroff, 2020; McLaughlin et al., 2012, 2013; Saunders & Adams, 2014; Skar et al., 2020), it remains imperative to better disseminate and implement effective child trauma treatments, such as Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; Cohen et al., 2017). With decades of rigorous, global empirical evidence, TF-CBT is a best practice trauma treatment for children ages 3–18 years with diverse traumatic exposures and related symptoms (Cohen et al., 2017; Medical University of South Carolina [MUSC], 2017). Still, evidence-based treatments (EBTs) like TF-CBT are often challenging to implement with fidelity in community-based settings (Greer et al., 2013; Lang & Connell, 2016; Lang et al., 2017; Lee et al., 2015). Moreover, prior research suggests didactic training alone rarely sustains high quality integration of EBTs within community-based settings (Bearman et al., 2017; Beidas et al., 2012; Beidas & Kendall, 2010; Dorsey et al., 2018; Dimeff et al., 2009; Fixsen et al., 2005; Frank et al., 2019; Herschell et al., 2010; Kavanagh et al., 2008; McHugh & Barlow, 2010; Schoenwald et al., 2004). Instead, more effective dissemination and implementation models such as Learning Collaboratives (LCs) include additional components (e.g., training cases, external consultation, quality improvement metrics) to better support fidelitous EBT delivery (Frank et al., 2019; Hanson et al., 2019; Nadeem et al., 2013). While LC initiatives have demonstrated promising results for TF-CBT-adherent adoption and sustainment (Ebert et al., 2012; Hanson et al., 2019; Helseth et al., 2020; Lang et al., 2015, 2017), the empirical role of in-house supervision in promoting therapist adherence—particularly TF-CBT adherence within the context of a LC—remains largely unexplored. Notably, prior studies suggest supervisory fidelity monitoring and feedback are vital to EBT adherence (Aarons, 2009; Carpenter et al., 2012; Swain et al., 2010; Lu et al., 2014), though these effects may vary based on the type and/or content of supervision practices (Bearman et al., 2013, 2017; Bradshaw et al., 2007; McLeod et

al., 2019; Milne et al., 2011; Schoenwald et al., 2009). Therefore, the current study examined (1) how supervision quantity and quality (i.e., evidence-based techniques targeting general or EBT-specific content) change pre- to post-LC and (2) how these changes predict pre- to post-LC improvements in community therapist adherence to evidence-based general and TF-CBT-specific practices.

Child Trauma

Trauma and its sequelae are tragically endemic, particularly during childhood and adolescence. Although exact prevalence rates remain elusive due to underreporting, poor surveillance, and inconsistent definitions, most studies indicate that 40%–71% of youth in the United States experience one or more traumatic events before reaching adulthood (Bartlett & Smith, 2019; Finkelhor et al., 2013; McLaughlin et al., 2012, 2013; Saunders & Adams, 2014), with even higher rates among child clinical and related welfare populations (Havens et al., 2012; Salazar et al., 2013; Skar et al., 2020). These traumatic events include physical and sexual abuse; witnessing domestic, community, or school violence; natural disasters; death of attachment figures; and vehicular accidents (Bartlett & Smith, 2019; Cohen et al., 2017; Saunders & Adams, 2014). Diagnostically, all of these events involve directly experiencing, witnessing, or learning about serious injury, actual or threatened death, or sexual violation to oneself or a loved one (American Psychiatric Association, 2013). Beyond the aforementioned prevalence of these events as well as the immediate horror, terror, and/or helplessness that they evoke (American Psychological Association Presidential Task Force on Posttraumatic Stress Disorder and Trauma in Children and Adolescents, 2008), child trauma is particularly concerning because of its well-established, long-lasting biopsychosocial sequelae and related costs, both personal and societal (e.g., Ai et al., 2013; Burns et al., 2004; Kilpatrick et al., 2003; Kisiel et al., 2009; Nemeroff et al., 2006; Pecora et al., 2009; Saunders, 2003).

Indeed, child trauma—and specifically child maltreatment—has been deemed the “single biggest contributor” for risk of both psychiatric and medical disorders across the lifespan

(Lippard & Nemeroff, 2020). Regarding the former, prior research suggests that childhood trauma accounts for approximately 45% of all childhood-onset psychiatric disorders, 32% of all adolescent-onset psychiatric disorders, and 28% of all psychiatric disorders in adulthood (McLaughlin et al., 2012). More specifically, child trauma increases not only life-time risk of post-traumatic stress disorder (PTSD), but also conduct, substance abuse, mood, and psychotic disorders, as well as suicidality and self-harm (Dye, 2018; Kilpatrick et al., 2003; Kisiel et al., 2009; Lippard & Nemeroff, 2020; Nemeroff et al., 2006; Pecora et al., 2009; Saunders, 2003). Etiologically, trauma exposure, particularly in early childhood, negatively impacts neurobiological development, including brain structures and circuitry, methylation and related gene expression, inflammatory cytokines, and neuroendocrinal functioning, particularly the hypothalamic-pituitary-adrenal (HPA) axis, which is responsible for regulating the body's stress response (Bartlett & Smith, 2019; de Bellis & Zisk, 2014; Dye, 2018; Lippard & Nemeroff, 2020; McEwen, 2000; Shonkoff et al., 2009). These neurobiological disruptions in turn imperil acquisition of critical psychosocial competencies (Bartlett & Smith, 2019; De Bellis & Zisk, 2014; Dye, 2018; Shonkoff et al., 2009), leading to lifelong impaired self-regulation and executive functioning, attachment problems, maladaptive coping strategies, feelings of inadequacy and negative self-schema, social skill deficits, and academic underachievement (Charmandari et al., 2005; Chu & Lieberman, 2010; Dunn et al., 2017; Howse et al., 2003; Huaging & Kaiser, 2003; Kaplow & Widom, 2007; Nelson et al., 2011; Perry, 2001; Reiland & Lauterbach, 2008). Moreover, these negative developmental cascades are linked to numerous medical risks; including heart disease, stroke, oral and visual problems, and hepatitis (Lippard & Nemeroff, 2020; Widom et al., 2012); as well as increased emergency, inpatient, primary, and specialist healthcare use (Bonomi et al., 2008; Leslie et al., 2010; Sickel et al., 2002).

Given these myriad transdiagnostic sequelae, the societal toll of childhood trauma is steep, including both direct and indirect costs (Bartlett & Smith, 2019). Direct effects include financial costs, particularly those related to hospitalizations and social services, such as child

welfare, law enforcement, and behavioral health facilities (Bartlett & Smith, 2019). Child abuse and neglect alone directly cost the United States around \$124 billion *annually*, averaging approximately \$210,012 per child (Fang et al., 2012). In contrast, indirect effects include the heightened involvement of trauma-exposed youth in the juvenile justice system and decreased work productivity (Shonkoff et al., 2009; Widom & Maxfield, 2001). Another indirect effect is the intergenerational transmission of trauma, and specifically child maltreatment. For instance, child abuse victimization—particularly when untreated—predicts child abuse perpetration by the victim against future generations (Cohen et al., 2008; Cross et al., 2018; Scheeringa & Zeanah, 2001; Tutus & Goldbeck, 2016). This cycle only serves to perpetuate the prevalence of child trauma, and in turn, the aforementioned trauma-related sequelae and related personal and societal costs. To mitigate these deleterious and pervasive effects, efficacious treatment for trauma-exposed youth and their affected families is crucial (Allen & Johnson, 2012; American Academy of Child and Adolescent Psychiatry, 2010; Chadwick Center for Children and Families, 2004; Saunders et al., 2004).

Fortunately, several evidence-based trauma-focused treatments for children and adolescents exist (see Chadwick Center for Children and Families, 2004; National Child Traumatic Stress Network [NCTSN], n.d.). These treatments include (but are far from limited to): Alternatives for Families—A Cognitive Behavioral Therapy (AF-CBT; Kolko et al., 2011), Attachment and Biobehavioral Catch-Up (ABC; Dozier, 2010), Attachment, Self-regulation, and Competence (ARC; Blaustein & Kinniburgh, 2010), Child-Parent Psychotherapy (CPP; Lieberman, 2004), Parent-Child Interaction Therapy (PCIT; Eyberg & Funderburk, 2011; see Batzer et al., 2018), and Risk Reduction Through Family Therapy (RRFT; Danielson, 2007). Although all of these treatments have some—if not substantial—supportive evidence, many are limited in the types of trauma or child ages they treat (see NCTSN [n.d.] for a review). However, one treatment notable for its inclusive age-range, comprehensive types of traumas addressed,

and rigor of empirical support is Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; Cohen et al., 2017)

TF-CBT

TF-CBT is a best practice trauma-treatment for youth ages 3 to 18 years with clinically significant trauma-related emotional and/or behavior problems (Cohen et al., 2017; Medical University of South Carolina [MUSC], 2017). Compared to other youth trauma treatments, TF-CBT is (a) appropriate for a wide range of youth exposed to effectively any type of trauma (e.g., toddlers exposed to sexual abuse, adolescents exposed to mass community violence); (b) relatively brief (e.g., typically completed in 12–20 sessions); (c) generalizable to diverse ethnic, racial, national, and related cultural backgrounds; and (d) distinguished by its unique conjoint child-caregiver and trauma narrative components (see below for greater detail; Cohen et al., 2017; MUSC, 2017). Although primarily designed and validated to treat post-traumatic stress, TF-CBT also targets trauma-related comorbidities, including depression, anxiety, attention deficits, hyperactivity, and conduct problems (Cohen et al., 2017; MUSC, 2017; Lucid et al., 2018). TF-CBT, as suggested by its name, is grounded in cognitive-behavioral theories, as well as family therapy and humanistic principles (MUSC, 2017). Conjointly, these foundational theories influence TF-CBT's six core values (i.e., components-based, respectful of cultural values, adaptable and flexible, family-focused, therapeutic relationships being central, and self-efficacy being promoted; see Cohen et al. [2017] for a full review). These core values and related theoretical background inform TF-CBT's three phases and subordinate components, as elaborated below.

TF-CBT Phases

Consistent with TF-CBT's core value of being components-based, TF-CBT's three treatment phases—(1) stabilization and skill-building, (2) trauma narration and processing, and (3) consolidation and closure—consist of nine semi-modular components. The components are represented by the PRACTICE acronym: psychoeducation and parenting skills, relaxation techniques, affect modulation, cognitive coping, trauma narration, in-vivo mastery, caregiver-child sessions, and enhancing future safety. Barring cases involving complex trauma (during which the first phase often constitutes half of treatment), equal time is typically dedicated to each phase (e.g., if treatment is completed in 12 sessions, each phase should roughly comprise four sessions; Cohen et al., 2017; MUSC, 2017).

Phase 1: Stabilization and Skill-Building. The first of the three TF-CBT phases, stabilization and skill-building consists of the psychoeducation and parenting skills (which typically persist through all three phases), relaxation techniques, affective modulation, and cognitive coping components (Cohen et al, 2017; MUSC, 2017). The psychoeducation component provides education to the client and caregiver(s) regarding the pre-treatment assessment findings, traumatic events experienced by the client, typical reactions to such events, and related treatment rationale, structure, and expected benefits. The related parenting skills component provides guidance to caregivers on managing child emotional-behavior problems (e.g., aggression, noncompliance, sleep disturbances, and fearful avoidance). During the relaxation and affective modulation components, therapists teach youth clients (and their caregivers) to accurately identify affect topography, valence, and intensity and regulate affect and physiological arousal via evidence-based relaxation techniques (e.g., diaphragmatic breathing, progressive muscle relaxation, guided imagery). In the final component of this phase, cognitive coping, the clinician connects clients' thoughts to their emotions, somatic sensations, and behaviors. In addition, the client and caregiver(s) are taught ways to identify, evaluate, and replace inaccurate or unhelpful cognitions. For each of these component-specific skills,

psychoeducation as well as modeling, role-play, and behavioral rehearsal are conducted in-session first with youth and then with participating caregivers. Assigned between-session, in situ practice reinforces skill acquisition and generalization.

Phase 2: Trauma Narration and Processing. The second phase, trauma narration and processing, is comprised of the trauma narration component. The purpose of this phase is to synergistically use the prior phase's skills to directly address intrusive, distressing memories of the index trauma(s) (Cohen et al, 2017; MUSC, 2017). To elaborate, this component serves as gradual exposure therapy, as the client is able to incrementally experience recalled external stimuli (e.g., sights, sounds, smells, textures) and internal experiences (e.g., cognitive, affective, and physiological reactions) related to the trauma(s) via the creation and then repeated retelling of their trauma narrative. Trauma narratives can use a variety of media. For instance, a young child might create a picture book depicting the traumatic event while an adolescent might write a poem or book. Regardless of medium, this phase ends once a youth can adaptively engage with and react to their trauma narrative and are ready to share their narrative with their caregiver(s), who in turn have been similarly prepared to respond supportively (Cohen et al., 2017; MUSC, 2017).

Phase 3: Consolidation and Closure. The third and final phase is the consolidation and closure phase, which involves in-vivo mastery, caregiver-child sessions, and enhancing future safety and development (Cohen et al., 2017; MUSC, 2017). The first component, in-vivo mastery, involves real-life exposure to fear-conditioned, but otherwise innocuous trauma cues (e.g., bathtubs, grocery stores, friendly dogs), pursuant to replacing dysfunctional, impairing avoidance with adaptive approach behavior. As previously suggested, conjoint caregiver-child sessions focus on youth sharing their trauma narrative with their caregiver(s), so the latter can validate and support the former versus becoming overly distressed, defensive, and/or dysregulated. The final PRACTICE component, enhancing safety and future development, provides the client, family, and possibly other caregivers (e.g., teachers or extended family

members) with the tools necessary for keeping the client safe. These tools are likely to include the identification of safe people and places, education around body ownership (e.g., teaching the child correct anatomical terminology), and a safety plan in the event of an emergency (e.g., running to a neighbor's house). In the end, the client (and their caregiver[s]) should feel a renewed sense of safety going forward and have plans for how to handle unsafe situations, present or prospective. True to TF-CBT's core values of being adaptable and respecting culture, the delivery, duration, and in some cases even order of these components can be altered to best suit a youth's and family's cultural, developmental, and psychosocial contexts (see Cohen et al. [2017] and MUSC [2017] for in-depth review of TF-CBT's components and phases).

TF-CBT Outcomes and Empirical Base

In addition to TF-CBT's marked flexibility, rigorous, decade-spanning, global empirical evidence supports TF-CBT as a best-practice treatment for trauma-exposed youth and families. Copious studies support TF-CBT's efficacy and effectiveness in improving post-traumatic stress, related externalizing and internalizing problems, and overall psychosocial functioning. Moreover, these treatment responses (which are elaborated below) have been documented across cultural, developmental, international, and trauma backgrounds (see Cohen et al. [2017], de Arellano et al. [2014], and Lenz & Hollenbaugh [2015] for more comprehensive reviews of TF-CBT's empirical basis).

True to its name, TF-CBT has had over 20 randomized control trials (RCTs) conducted over equally numerous years that support its efficacy and effectiveness in remedying post-traumatic stress (Cohen et al., 2017; de Arellano et al., 2014; Lewey et al., 2018). More specifically, Lenz and Hollenbaugh's (2015) meta-analysis of 21 between-group studies involving 1,009 TF-CBT-treated youth found that TF-CBT is significantly associated with large pre- to post-treatment decreases in treated youth's post-traumatic stress ($g = -1.48$, 95% CI [-2.13, -0.83], $p < .01$) compared to wait-list and passive controls. Furthermore, studies have shown these improvements are typically sustained during follow-up studies (e.g., 1–2 years

post-treatment; Cohen & Mannarino, 1996a, 1996b, 1997, 1998a, 1998b; Cohen et al., 2004, 2005; Deblinger et al., 2006; Webb et al., 2014). Moreover, TF-CBT consistently and significantly outperforms comparable treatments in reducing youth's trauma-related sequelae; namely, RCTs and meta-analyses have directly and indirectly compared and found TF-CBT superior to usual community care (e.g., $d_s = 0.30\text{--}2.39$; Deblinger et al., 1996, 1999; Jensen et al., 2014; Lyons et al., 2006; Murray et al., 2015; Ormbaug et al., 2014), child-centered therapy (e.g., $d_s = 0.46\text{--}0.81$; Cohen et al., 2004; 2011; Deblinger et al., 2006), non-directive supportive therapy (Cohen & Mannarino, 1996a; 1996b; 1997; 1998a; 1998b; Cohen et al., 2004; 2011; Deblinger et al., 2006), and eye movement desensitization and reprocessing (EMDR; Diehle et al., 2015; Lewey et al., 2018). Furthermore, TF-CBT has been shown to be significantly more cost-effective, on a societal level, than alternative treatments for youth with traumatic stress (Aas et al. 2018; Greer et al. 2014).

Research also supports TF-CBT's effectiveness in treating youth's related internalizing and externalizing comorbidities and symptoms (see Cohen et al. [2017]). In regard to youth's internalizing symptoms, evidence supports TF-CBT's effectiveness at addressing co-occurring depression (meta-analytic $g = -0.78$, 95% CI $[-1.41, -0.15]$; Lenz & Hollenbaugh, 2015; e.g., Cohen et al., 2004; 2005; 2007; Deblinger et al., 2011; 2016; Jaycox et al., 2010; Jensen et al., 2014; McMullen et al., 2013; O'Callaghan et al., 2013; Ormbaug et al., 2014; Salloum et al., 2015; Goldbeck et al., 2016), anxiety (e.g., Cohen et al., 2004; 2006; 2011; Deblinger et al., 2011; Goldbeck et al., 2016; Mannarino et al., 2012; McMullen et al., 2013; O'Callaghan et al., 2013), fear (Deblinger et al., 2011; King et al., 2000; Mannarino et al., 2012), shame (Cohen et al., 2004; Deblinger et al., 2006; 2016; Murray et al., 2013), stress (Deblinger et al., 2016; McMullen et al., 2013), maladaptive cognitions ($d = 0.48$; Goldbeck et al., 2016), and traumatic grief (e.g., $d = 1.36$; Cohen et al., 2004; 2006; O'Donnell et al., 2014). As for externalizing problems, TF-CBT has been found to significantly improve youth's disruptive behavior problems (e.g., Cohen et al., 2004, 2006; Deblinger et al., 2011; 2016; Goldbeck et al., 2016; Lyons et al.,

2006; Mannarino et al., 2012), problematic sexual behaviors (e.g., Cohen & Mannarino, 1996a; 1996b; 1997; 1998b; Stauffer & Deblinger 1996), and hyperactivity (Diehle et al., 2015). Moreover, research indicates that these benefits are typically maintained, if not further improved, at follow-up (e.g., $g = -0.61$ for child anxiety from post-treatment to 12-month follow-up assessment; Mannarino et al., 2012).

More than simply reducing the above symptoms, TF-CBT also has been shown to promote youths' adaptive functioning. For instance, TF-CBT has been linked to significant pre- to post-treatment increases in youths' prosociality (e.g., $ds = 1.57-1.78$; McMullen et al., 2013; O'Callaghan et al., 2013), safety skills (Deblinger et al., 2001), resiliency ($ds = 0.56-1.91$; Deblinger et al., 2017), and overall functioning (e.g., $ds = 1.24-1.96$; Kameoka et al., 2015). Furthermore, research suggests TF-CBT participation may prevent future traumatic exposure (Cohen et al., 2011).

Moreover, studies repeatedly indicate that youth are not the only ones to display improvement as a consequence of TF-CBT; participating caregivers also reap benefits. Specifically, research has linked TF-CBT completion with significant improvements in positive parenting skills (Cohen et al., 2004; Deblinger et al., 2006; 2011; Mannarino et al., 2012). Additionally, evidence suggests TF-CBT can directly benefit participating caregivers' own mental health, including significant reductions in caregiver depression and emotional distress (Cohen et al., 2004; 2006), abuse-specific distress (Deblinger et al., 2011; Mannarino et al., 2012; Stauffer & Deblinger, 1996), and intrusive thoughts (Deblinger et al., 2001). Consistent with TF-CBT's youth outcome research, findings indicate that parental TF-CBT benefits are, on average, also maintained and sometimes significantly enhanced, at 6- and 12-month follow-up assessments (e.g., $g = -0.60$ for caregiver distress from post-treatment to 12-month follow-up; Mannarino et al., 2020).

Finally, ample research supports the robustness of TF-CBT's benefits. For example, the aforementioned youth and caregiver gains have been replicated across various trauma types

(e.g., physical abuse, sexual abuse, emotional abuse, neglect, witnessing community and/or domestic violence, exposure to war or natural disasters, traumatic loss of a loved one, etc.; de Arellano et al., 2014; Lenz & Hollenbaugh, 2015). Moreover, TF-CBT has been successfully implemented in various formats, including individual and group therapy (Deblinger et al., 2011; McMullen et al., 2013; O'Callaghan et al., 2013; O'Donnell et al., 2014). Similarly, successful implementation has been observed amongst different levels of development (e.g., toddlers, preschoolers, adolescents; Cohen & Mannarino, 1998; Deblinger et al., 2001; 2011; Kameoka et al., 2015; Lyons et al., 2006; Murray et al., 2015; Salloum et al., 2016; Scheeringa et al., 2011) and diverse service settings (CATS Consortium, 2010; Lyons et al., 2006) including community clinics (Cohen et al., 2011; Dorsey et al., 2014; Goldbeck et al., 2016; Jaycox et al., 2010; Jensen et al., 2014; Konanur et al., 2015; Murray et al., 2015; Ormhaug et al., 2014; Zorzella et al., 2015) and schools (Jaycox et al., 2010). Furthermore, evidence supports consistent treatment outcomes across varying ethnic groups and countries (e.g., Democratic Republic of Congo, Haiti, Japan, Tanzania, Zambia, etc.; Diehle et al., 2015; Jaycox et al., 2010; Jensen et al., 2014; Kameoka et al., 2015; Konanur et al., 2015; McMullen et al., 2013; Murray et al., 2013; 2015; Ormhaug et al., 2014; O'Callaghan et al., 2013; O'Donnell et al., 2014; Wang et al., 2016; Stewart et al., 2020; Zorzella et al., 2015).

In sum, TF-CBT is a highly efficacious treatment for children and adolescents experiencing trauma-related symptoms, as well as for their participating caregivers and families. The treatment process involves identifying problems and systematically working through PRACTICE components to help clients overcome fears and anxieties related to trauma cues, improve their daily functioning, and ensure future safety. Yet, as with any EBP, these components as well as TF-CBT overall are only effective nominally when carried out with sufficient treatment fidelity (Allen et al., 2018; Cox et al., 2019; Bond et al., 2011; Drake et al., 2003; McLeod et al., 2019).

Treatment Fidelity

Otherwise known as treatment integrity (DiGennario et al., 2005; Burns et al., 2008) and implementation fidelity (Byrnes et al., 2010; Carroll et al., 2007; Gingiss et al., 2006; Mihalic, 2004; Rohrbach et al., 2010), treatment fidelity is defined as the degree to which an intervention is delivered as delineated by its protocol (i.e., its codified treatment components and procedures; Allen et al., 2018; Perepletchikova et al., 2007; Proctor et al., 2011; Schoenwald et al., 2011). In other words, treatment fidelity exists when a clinician delivers a particular therapy as intended by its developer(s). Prima facie, optimal treatment outcomes require high treatment fidelity—an assertion that has found increasing, though not always universal, empirical support (Barber et al., 2007; Caron et al., 2020; Carroll et al., 2007; Davidson et al., 2004; Drulak & DuPre, 2008; Eames et al. 2008; Farmer et al., 2017; Forsberg et al., 2015; Henggeler et al., 2008; Hoffart et al., 2005; Holder et al., 2017; Johnson-Kozlow et al., 2008; Robbins et al., 2011; Shaw et al., 2004; Strunk et al., 2010; Thijssen et al., 2017; cf. Barber et al., 2006; Huppert et al., 2001; McLeod et al., 2019; Park et al., 2015; Pavo et al., 2004; Webb et al., 2010). Consequently, clinical-behavioral health disciplines are paying greater attention to treatment fidelity, with an emphasis on (a) identifying its key elements and (b) validating strategies to measure and increase those elements (Allen et al., 2018; Bellg et al., 2004; Bopp et al. 2013; Breitenstain et al., 2020; Haynes et al., 2016; Perez et al. 2016; Resnick et al., 2005).

Based on those efforts, treatment fidelity is now widely recognized as a multidimensional construct (Allen et al., 2018; Barber et al., 2007; Carroll et al., 2007; Cox et al., 2019; Dane & Schneider, 1998; Dusenbury et al., 2003; McLeod et al., 2009; 2019; Perepletchikova et al., 2007; Schoenwald et al., 2011). More specifically, most conceptual frameworks (see Allen et al., 2018) view treatment fidelity as having three core factors: (1) differentiation, (2) adherence, and (3) competence (Allen et al., 2018; Barber et al., 2007; Bearman et al., 2017; Cox et al., 2019; McLeod et al., 2009; 2019; Perepletchikova et al., 2007; Schoenwald et al., 2011). While the

current study is predominantly concerned with treatment adherence, all three components—and their relation to TF-CBT—are outlined below.

Differentiation

Treatment or program differentiation is the degree to which treatments differ from one another across critical dimensions (Allen et al., 2018; Bearman et al., 2017; Carroll et al., 2007; Schoenwald et al., 2011). Most typically, treatments are distinguished from one another by their discrete, observable clinical techniques and strategies, which are otherwise known as practice elements or treatment components (Allen et al., 2019; Carroll et al., 2007; Chorpita & Daleiden, 2009; Chorpita et al., 2005; Higa-McMillan et al., 2016; Schoenwald et al., 2011). Beyond protocol-prescribed and –proscribed practice elements, treatments can also be differentiated by their outlining and/or contraindication of certain mechanisms of change, implementation modalities and settings, and client demographics and diagnostic characteristics (Allen et al., 2018; Carroll et al., 2007; Schoenwald et al., 2011). Taken together, core prescribed and proscribed facets can demarcate one treatment protocol within or across programs, as well as superordinate treatment families and models (i.e., treatment interventions that share a majority of practice elements and theoretical foundations; e.g., behavioral parent training for child conduct problems and CBT for anxiety; Chorpita & Daleidan, 2009; Chorpita et al., 2005; Higa-McMillan et al., 2016; Schoenwald et al., 2011; Southam-Gerow & Prinstein, 2014; Wethington et al., 2008).

Compared to other psychosocial treatments for youth, TF-CBT can be differentiated by several factors, such as its wide age range, number of addressed traumatic experiences and symptoms, unique practice elements, and modalities (Cohen et al., 2017). True to its name, TF-CBT is distinguished foremost from other CBT-based treatments by its emphasis on treating post-traumatic stress and related psychosocial sequelae, as well as its core elements that involve explicit trauma-relevant exposures (e.g., trauma narrative; Cohen et al., 2017; Dorsey et al., 2016). When compared to other trauma-focused treatments, TF-CBT remains relatively

unique on multiple levels. First, TF-CBT is validated for effectively any type of trauma (Cohen et al., 2017), while its counterparts are limited in the traumatic experiences their protocols address (e.g., PCIT and AF-CBT are validated for child physical abuse, but not sexual abuse; CPP is designed for interpersonal maltreatment but not for natural disasters, accidental injury, or medical trauma exposure). Second, TF-CBT serves a wider developmental range (i.e., ages 3–18) than other youth trauma treatments that either serve only young children (e.g., ABC, CCP, and PCIT) or exclude them (e.g., AF-CBT and RRFT). Third, TF-CBT differs from similar treatments in its validated modalities (e.g., AF-CBT’s protocol is only for individual treatment [Kolko et al., 2011]; whereas, TF-CBT has empirically supported protocols for individual and group treatment [Cohen et al., 2017]). Finally, TF-CBT and its larger treatment family are distinguished from other treatment programs by their prohibition of questionable and iatrogenic practice elements for child trauma and anxiety symptoms (e.g., hypnosis, non-directive play, rebirthing; Dorsey et al., 2017; Higa-McMillon et al., 2016). Given these salient differentiations, TF-CBT requires protocol-specific competencies for it be implemented with requisite fidelity.

Competence

Clinical or therapist competence entails a clinician’s skill and responsiveness in delivering appropriate practice elements during therapeutic services (Allen et al., 2018; Bearman et al., 2017; Cox et al., 2018; McLeod et al., 2009, 2019; Perepletchikova & Kazdin, 2005; Schoenwald et al., 2011; Webb et al., 2010). Although various taxonomies of clinical competence exist, most frameworks recognize two main variations of competence: global and technical (Allen et al., 2018; Assessment of Competency Benchmarks Work Group, 2007; Barber et al., 2007; Brown et al., 2018; Epstein & Hundert, 2002; Kaslow, 2004; Perepletchikova et al., 2009). Global competence (otherwise known as *common factors* [Castonguay, 1993; Laska et al., 2014], *foundational* [Rodolfa et al., 2005; Spruill et al., 2004]), *general* [Binder, 2004], or *standard* competence [McLeod et al., 2019]) consists of broad therapeutic skills applicable across most, if not all, treatment models (Barber et al., 2007; Brown et al., 2018).

These superordinate, trans-protocol skills include (a) building and maintaining empathic, genuine, and collaborative therapeutic alliances; (b) promoting positive treatment expectancies and accepted rationale; (c) focusing treatment with efficient session pacing, structure, assignments, and key themes; (d) instigating change via psychoeducation, practice, feedback, and interpersonal interpretation; and (e) responsiveness to client needs (Brown et al., 2012; 2018; Castonguay & Beutler, 2006; Claiborn et al., 2002; Crits-Christoph & Connolly Gibbons, 2002; Elliot et al., 2011; Faber & Doolin, 2011; Follette & Greenberg, 2006; Hill & Knox, 2002; Grenavage & Norcross, 1990; McLeod et al., 2016; Norcross 2002; 2001; Nock et al., 2007; Woody & Ollendick, 2006). In contrast, technical competence; also known as *specific, intervention, model, and limited-domain* competence; involves a therapist's skills at responsively implementing practice elements that are relatively unique to a particular treatment protocol, program, and/or model (Barber et al., 2007; Brown et al., 2018; McLeod et al., 2016, 2019; Perepletchikova, 2006). Both global and technical competence relate to competency standards set by the ethics code of the American Psychological Association (APA, 2017; e.g., only providing services within one's areas of competence, mandates to develop and maintain areas of competence).

Moreover, both categories of competence apply to TF-CBT, as TF-CBT requires therapists to implement all treatment phases skillfully (Cohen et al., 2017; MUSC, 2017). In terms of global competence, TF-CBT's core values assert the centrality of the therapeutic relationship, the importance of mutual respect, and the need for therapists to flexibly tailor treatment in response to clients' idiographic needs (Cohen et al., 2017). Apart from these global competence-relevant values, TF-CBT's components require both global and technical competence. For instance, the psychoeducation component requires *global* skills related to promoting clear, reasonable, and positive treatment expectations, as well as providing novel information that can instigate change; however, it also requires *technical* skills relating to understanding and sensitively communicating treatment-specific rationale and information (e.g.,

prevalence rates of domestic violence, reasons why some children do not initially disclose sexual abuse to supportive caregivers, need for explicit trauma exposures; Cohen et al., 2017). Additionally, both global and TF-CBT-specific clinical acumen is needed to understand when and how to flexibly tailor TF-CBT components, such as how a trauma narrative should be constructed and delivered, as well as how frequently and with whom it should be shared. To elaborate, a 4-year-old child is not going to complete the trauma narrative in a manner comparable to a 16-year-old child, either in content (e.g., older youth are typically able to provide greater detail and reflection) or in form (e.g., younger children are more likely to need to draw versus write a narrative). Relatedly, TF-CBT does not have rigid standards to determine if a caregiver is prepared to adaptively respond to a child's shared trauma narrative during the conjoint caregiver-child component; instead, the protocol largely relies on individual therapist's judgment (Cohen et al., 2017). This judgment necessitates not only global competence in terms of accurate interpersonal interpretations, but also TF-CBT-specific competence relative to conjoint caregiver-child sessions and secondary traumatic stress (Cohen et al., 2017; MUSC, 2017). Yet, these vital competencies, both general and specific to TF-CBT (or any other protocol) cannot be achieved fully without adequate treatment adherence (Barber et al., 2007; Perepletchikova & Kazdin, 2005; Rapley & Loades, 2018; Waltz et al., 1993).

Adherence

Treatment or intervention adherence is the degree to which a clinician uses components and content *prescribed* by a particular treatment model or protocol whilst simultaneously avoiding *proscribed* procedures (Allen et al., 2018; Collyer et al., 2019; Cox et al., 2019; McLeod et al., 2019; Perepletchikova, 2006; Rapley & Loades, 2018; Schoenwald et al., 2011). To elaborate, treatment adherence entails the extent to which a clinician utilizes practice elements that are 1) indicated but shared across evidence-based programs and/or models (i.e., “common elements”), 2) indicated and distinct (i.e., practice elements that differentiate one treatment protocol, program, and/or model from another), 3) contraindicated, 4) and/or neither

indicated or contraindicated (i.e., elements that are non-differentiating and presumably benign; Allen et al., 2018; Barber et al., 2007; Chorpita et al., 2005, 2007; Dusenbury et al., 2003; Waltz et al., 1993). Strong adherence requires delivery of the first two practice element categories (which are respectively known as *general* and *protocol-specific adherence*) while also avoiding the third category, and in certain contexts, the fourth as well (Allen et al., 2018; Barber et al., 2007). This delivery is most commonly conceptualized dichotomously as whether or not a specific practice element was implemented for a session, client, or general caseload, but alternative literature also considers the dosage of the practice element, in terms of amount and frequency (Allen et al., 2018; Brownson et al., 2009; Horn & Gassaway, 2007).

In terms of TF-CBT, adherence to its protocol explicitly entails delivery of its core practice elements, which most notably consist of its aforementioned PRACTICE components (Hanson et al., 2017; Deblinger et al., 2008). These components include common elements shared by other CBT programs (e.g., cognitive coping content such as identification, reappraisal, and restructuring of maladaptive cognitions; Higa-McMillan et al., 2016) and behavioral parent training programs (e.g., parenting skills such as praise, selective attention, time-out, and contingency reinforcement; Kaehler et al., 2016; Leijten et al., 2015). These components also involve protocol-differentiating elements, such as explicit trauma exposures (e.g., trauma narrative and related conjoint youth-caregiver components; Dorsey et al., 2017; McLeod et al., 2019; Peris et al., 2015). A clinician's utilization of these components—and avoidance of protocol-contraindicated practices and procedures (e.g., encouraging destructive cathartic venting of negative feelings, spending entire sessions playing fun games without any trauma-focused discussion; Cohen et al., 2017; Hanson et al., 2019)—equates to TF-CBT-*specific adherence*. Yet, faithful implementation of TF-CBT also involves *general adherence*; that is, delivery of practice elements, applicable to most, if not all, evidence-based treatment models. Such elements—which cut across all PRACTICE components—include, but are not limited to, assessment, agenda setting, rapport building, maintenance of the therapeutic

alliance, and homework assignment (Barth et al., 2012; Blackburn et al., 2001; Cohen et al., 2017; Hanson et al., 2019; Kazantzis et al., 2000, 2010; Mausbach et al., 2010; Mueser et al., 2008; Kirsch et al., 2018; Ormhaug et al., 2014; Ovenstad et al., 2020).

Additionally, TF-CBT—consistent with its core value of adaptability—mandates flexible, rather than rigid, adherence to these specific and general practice elements (Cohen et al., 2017; MUSC et al., 2017). This concept of *manualized flexibility* (Beutler, 1999; Stratton, 2011) or *flexibility within fidelity* (Kendall & Beidas, 2007) means that truly adherent TF-CBT therapists tailor general and protocol-specific practice elements to suit the diverse intersectional needs of clients, caregivers, agencies, and other delivery contexts (Cohen et al., 2017; MUSC, 2010, 2017). Flexible tailoring or adaptations can be made to which techniques and/or content are implemented during a specific component. For example, the relaxation component can be tailored, yet still adhered to, in terms of which techniques are modeled and practiced based on cultural or religious alignment (e.g., tai chi, meditation, mindful prayer, guided imagery of tensing a bow, or listening to gospel or other worship-based music; Bigfoot & Schmidt, 2010; Cohen et al., 2017; Damra et al., 2014; MUSC, 2017; O’Callaghan et al., 2013; Rivera de Arellano, 2008; Walker et al., 2010; Wang et al., 2016; Woods-Jaeger et al., 2017) or developmental stage (e.g., teaching a preschooler whole body tensing and relaxing versus teaching a teenager more advanced progressive muscle relaxation; Cohen et al., 2017; MUSC, 2017; Pollio & Deblinger, 2017). Furthermore, the explicit adaptability of TF-CBT’s protocol also means that adherence can be retained even if certain components, *in certain contexts*, are not used at all. For instance, the in vivo exposure component is deemed unnecessary in cases where a youth is not maladaptively avoiding trauma reminders (Cohen et al., 2017). Similarly, conjoint child-caregiver sharing of the trauma narrative is typically a core feature that must be done to be fully adherent to TF-CBT; yet, in cases where a client does not have an available, engaged, and supportive caregiver (e.g., refugee minors), this component can be omitted (Cohen et al., 2017; Unterhitzberger et al., 2019). Moreover, TF-CBT’s protocol directs the *addition* of extra

components for cases involving clinically significant traumatic grief (e.g., grief psychoeducation, preserving positive memories, redefining the lost relationship and committing to new relationships; Cohen et al., 2017; MUSC, 2017). Finally, different delivery contexts or modalities can entail adherence-congruent adaptations (e.g., adapted elements for group, school, or residential settings [Cohen et al., 2016, 2017; Deblinger et al., 2001, 2011; Jaycox et al., 2010; McMullen et al., 2013; O'Callaghan et al., 2013; O'Donnell et al., 2014] or tablet, web-based, or other telehealth augmentations [Davidson et al., 2019; Orengo-Aguayo et al., 2018]). Collectively, flexible general and specific adherence presumably improves the effectiveness of TF-CBT (as well as other evidence-based treatments; Allen et al., 2018; Barber et al., 2006, 2008; Collyer et al., 2019; Durlak & DuPre, 2008; Hogue et al., 2008; Kumpfer et al., 2008; Marek et al., 2006; Galovski et al., 2012; Kennedy et al., 2000; Levitt et al., 2007; Stanton et al., 2005; Stratton, 2011; Webb et al., 2010).

Empirical research on adherence-outcomes relations.

Non-TF-CBT adherence-outcome research. As previously mentioned, a growing body of studies have empirically examined the relation between fidelity—and particularly adherence—on treatment outcomes (Barber et al., 2007; Collyer et al., 2019; Cox et al., 2019; Hanson et al., 2016; Sijercic et al., 2020; Webb et al., 2010). These studies, which have only utilized observational and/or correlational rather than experimental designs, (Barber et al., 2007; Collyer et al., 2019; Rapley & Loades, 2018; Webb et al., 2010) have predominately—though not universally—found a significant, positive relation between treatment adherence and outcomes. Notwithstanding, the *magnitude* of the reported adherence-outcome relation has varied widely. Although most studies have reported a small effect (e.g., Barber et al., 1996; Dagenais, et al., 2009; DeRubeis & Feeley, 1990; Garner et al., 2009; 2012; Gaston et al., 1994; Gillespie et al., 2017; Gillham et al., 2006; Graham et al., 2014; Henggeler et al., 1997; Hogue et al., 2008; Holth et al., 2011; Lange et al., 2017; Minonne, 2008; Patton et al., 2009, Rowe et al., 2013; Sexton & Turner., 2010), others have reported a trivial effect (e.g., Al et al., 2014; Ginsburg et

al., 2012; Henggeler et al., 1999; Loeb et al., 2005; Lofholm et al., 2014; McCambridge et al., 2011; Ogrodniczuk, 1997; Paivio et al., 2004; Podell et al., 2013; Robbins et al., 2011; Schoenwald et al., 2003; Spektor, 2008). Still, others have reported positive effect sizes that were moderate (e.g., Marziali, 1984; Spektor, 2008; Strauss et al., 2012; Strunk et al., 2010) or even large (e.g., Liber et al., 2010; Luborsky et al., 1985). In stark contrast, some studies have reported a significant, *negative* adherence-outcome association that was typically trivial in size (e.g., Barber et al., 2006; Bloomquist et al., 2013; Castonguay et al., 1996; Feeley et al., 1999; Gaston et al., 1994; 1998; Gaston & Ring, 1992; Minnone, 2008; Piper et al., 1986; Rowe et al., 2013; Shechtman & Leichtentritt, 2010), though sometimes small (e.g., Barber et al., 2008; Hall, 2007; Huppert et al., 2006; Loeb et al., 2005) or moderate (e.g., Piper et al., 1991; Hall, 2007). Additionally, a handful of studies have found a *non-significant* adherence-outcome relation (e.g., Hartnet et al., 2016; Heywood & Fergusson, 2016; Hogue et al., 2008; Horowitz et al., 1984; Overbeek et al., 2013) or alternatively a significant *nonlinear* (e.g., quadratic) association (Barber et al., 2006; 2008; Hogue et al., 2008; Piper et al., 1991).

Beyond primarily testing for linear adherence-outcome relations (Collyer et al., 2019; Webb et al., 2010), the vast majority of the above studies have operationalized treatment outcomes as pre- to post-treatment improvement in client symptoms (or sometimes global functioning; Barber et al., 2007; Collyer et al., 2019; Goense et al., 2016; Rapley & Loades, 2018; Webb et al., 2010; Zarafontis-Muller et al., 2014). In contrast, a few studies have examined the relation between treatment fidelity (including adherence) and outcomes, with the latter being defined as whether a client completed or prematurely terminated treatment. These studies have reported a significant, positive relation between adherence and treatment completion, to either a moderate (e.g., $r = .41$; Haug et al., 2016) or large degree ($d = 1.03$; Thijssen et al., 2017).

Due to the growing number as well as diverse findings of these individual studies, a few meta-analyses have tried to better summarize and pinpoint the overall relation between

treatment adherence and client outcomes (i.e., Collyer et al., 2019; Goense et al., 2016; Webb et al., 2010). Like the heterogeneous research and results they aggregated, these meta-analyses have varied on their included client ages and symptoms, treatment results, and ultimate findings. The first, conducted by Webb et al. (2010) analyzed 32 studies which examined the relation between adherence and clinical outcomes (i.e., symptom reduction) across treatment models (e.g., CBT, client-centered, interpersonal, psychodynamic therapy) and targeted problems (e.g., depression, eating disorders, panic disorder, substance use), but exclusively with adult clients. Included effect sizes (i.e., r s) ranged from -.40 to .47, and the average weighted effect size was trivial and non-significant ($r = .02$, 95% [-.07, .10]).

Adherence-outcome effect sizes had significant, low-to-moderate heterogeneity ($I^2 = 47.0\%$; $Q = 50.90$, $p < .01$). Neither treatment modality, primary targeted problems, temporal confounds, nor therapeutic alliance significantly moderated the adherence-outcome relation (p s = .46–.55).

However, studies that targeted clinical depression ($n = 6$) had a positive, small, and marginally significant effect (likely due to low power) for adherence on outcome ($r = .12$, $p = .08$), suggesting that adherence may matter more for certain problem types, at least for adult clients.

Given that prior narrative reviews have suggested that client age (and related psychiatric problems and treatments) may moderate the adherence-outcome relation, Collyer et al. (2019) conducted a meta-analysis of 35 studies that also varied in targeted problems (e.g., conduct problems, substance use, anxiety, depression) and treatment modalities (e.g., CBT, client-centered), but involved youth versus adult clients. Included effect sizes ($n = 29$) ranged from trivial to moderate in magnitude (r s = -.07–.44), with most studies ($n = 24$; 83%) finding a significant adherence-outcome association; whereas, a minority ($n = 5$; 17%) reported no significant relation between the two. Overall, the average weighted effect size of adherence on youth outcomes was positive, small, and significant ($r = .10$, 95%CI [.06, .13], $p < .001$). Given the significant heterogeneity of effect sizes ($Q = 62.35$, $p < .001$), potential moderators were tested; results indicated that adherence related positively to outcome across clinical groups (r s

= .07–.13) and specific treatments ($r_s = .09$ –.17), but *only* for treatments that were CBT-based (i.e., the adherence-outcome association was trivial and nonsignificant for non-CBT treatments; $r = .006$, $p = .94$). For the two studies that also examined therapeutic alliance, alliance did not significantly moderate the adherence-outcome relation (Hukkelberg & Ogden, 2013; Liber et al., 2010). Sensitivity analyses controlling for study rigor and methodological biases did not significantly affect any of the above results, though potential publication biases could attenuate them.

Given these results and prior systematic reviews that further suggest that fidelity-outcome relations may be stronger for younger clients and/or certain targeted problems, treatment models, and specific protocols (particularly CBT-based ones; see Barber et al. [2007], Novins et al. [2013], Rapley and Loades [2018], and Zarafontis-Muller et al. [2014]). Goense et al. (2016) conducted a meta-analysis of 17 studies (with 91 effects) that examined fidelity-outcome associations specifically for youth treated for antisocial behavior. Unlike the above meta-analyses, they examined overall fidelity-outcome associations, since most of their analyzed studies did not provide separate adherence and/or competence data. Yet, similar to the other meta-analyses, they found an overall positive fidelity-outcome relation, and like the only other youth-specific meta-analysis, this relation was significant. However, the magnitude of their reported relation was notably larger (i.e., moderate-to-large). Specifically, client outcomes were trivial-to-small, as well as nonsignificant, when fidelity was low ($d = 0.14$, $p > .05$), but were medium-to-large, as well as significant, when fidelity was high ($d = 0.63$, $p < .001$). Furthermore, when controlling for moderators (e.g., study design, treatment protocol, and intervention duration), the relation between fidelity and client outcomes remained significant, and increased to a large magnitude ($r = .61$, $p = .005$; $\beta = .57$).

Overall, these meta-analyses—as well as their constituent and newer individual studies—suggest that greater adherence is associated with improved treatment outcomes, though the magnitude of this effect likely varies significantly depending on client-level (e.g., age, targeted

symptoms) and intervention-level factors (e.g., treatment model, protocol-specific elements; Caron et al., 2020; Collyer et al., 2019; Novins et al., 2013; Rapley & Loades, 2018; Zarafontis-Muller et al., 2014). For example, Caron et al. (2020) found that greater adherence predicted better pre- to post-treatment anxiety improvement for youth randomly assigned to a full CBT protocol, but not those assigned to a relaxation-skills-only intervention. Additionally, some authors posit that the strength of adherence-outcome relations might be stronger for interventions that primarily target clients with internalizing versus externalizing problems (Hogue et al., 2008; Podell, 2011; Rapley & Loades, 2018; Zarafontis-Muller et al., 2014; cf. Goense et al., 2016). Moreover, evidence suggests that greater protocol-specific adherence may predict better clinical outcomes for specific, well-differentiated evidence-based protocols (e.g., Multisystemic Therapy; Henggeler et al., 1997), but not necessarily for more general, non-differentiated treatments (e.g., non-protocol-specific CBT; McHugh et al., 2009), even when targeting the same client population (e.g., antisocial youth; Collyer et al., 2019). Finally, within specific protocols, fidelity to certain practice elements, but not others, can predict treatment outcomes (Farmer et al., 2017; Shechtman & Leichtentritt, 2010).

Given this relative ambiguity, complexity, and specificity, further—and *better*—research on adherence-outcome relations is warranted. Namely, future studies should employ experimental designs and/or better address common measurement problems (e.g., use of audio versus video recordings, less experienced undergraduate raters, and underpowered sample sizes; Barber et al., 2007; Chinchilla, 2007; Collyer et al., 2019; Cox et al., 2019; Feeley et al., 1999; McLeod et al., 2019; Rapley & Loades, 2018; Webb et al., 2012). Additionally, research needs to avoid ceiling effects related to predominately examining fidelity-outcome relations with highly adherent university clinicians versus more variably adherent community clinicians (Barber et al., 2007; Chinchilla, 2007; Collyer et al., 2019; Cox et al., 2019; Feeley et al., 1999; McLeod et al., 2019; Rapley & Loades, 2018; Webb et al., 2012). Indeed, studies that have examined a less restricted range of adherence (e.g., Amaya-Jackson et al., 2018; Goense et al., 2016; Imel et

al., 2014; Milne et al., 1999; Thijssen et al., 2017) typically report medium-to-large adherence-outcome effects. Regardless, the aforementioned evidence in aggregate suggests that higher fidelity (and adherence specifically) predicts better clinical outcomes, particularly for youth treated with differentiated, evidence-based protocols that are CBT-based. Additionally, this literature suggests that fidelity (and the related adherence-outcome relation) should be examined for specific protocols, like TF-CBT. This need is particularly notable for TF-CBT given that none of the above meta-analyses included any study that examined fidelity's impact on outcomes specifically for TF-CBT.

TF-CBT-specific adherence and clinical outcomes. Although several studies have explicitly measured TF-CBT treatment adherence during clinical trials, most have examined adherence only for fidelity monitoring purposes (i.e., demonstrating that appropriate treatment adherence occurred during a clinical trial, but not otherwise examining its relation to any antecedent or outcome; e.g., Barnett et al., 2019; Dorsey et al., 2014; Jensen et al., 2018; Konanur et al., 2015; Murray et al., 2015; Polak et al., 2015; Salloum et al., 2016; Unterhitzberger et al., 2019; Zorzella et al., 2015). A smaller number of studies have examined treatment adherence as an outcome variable (e.g., how training models or therapist characteristics impact TF-CBT-specific adherence; e.g., Ascienzo et al., 2020; Cohen et al., 2016; Davidson et al., 2019; Deblinger et al., 2020; Lang et al., 2015; Ovenstad et al., 2020). In contrast, only one published study has empirically examined the TF-CBT-specific relation between treatment adherence and client outcomes (i.e., Amaya-Jackson et al., 2018).

Namely, Amaya-Jackson and colleagues (2018) examined whether or not community-based clinicians ($n = 124$) could implement TF-CBT with high fidelity (i.e., adherence and competence) within the context of a specific training and implementation model (i.e., a Learning Collaborative; LC [see sections below for more details on LCs]). Moreover, the study assessed whether improvements in TF-CBT-specific adherence and competence predicted symptom improvements in youth ($n = 156$) treated with TF-CBT for post-traumatic stress. TF-CBT-specific

fidelity and particularly adherence were measured with the TF-CBT Fidelity and Competency Consultation Metric (Potter et al., 2008), a measure designed for this project with the approval of TF-CBT's developers. This measure consisted of 12 scales for which TF-CBT trainers rated a therapist-trainee's application of each TF-CBT component during observed cases, using a 5-point Likert scale (0 = "not addressed", 4 = "addressed with fidelity and advanced clinical skill"). In contrast to other therapist characteristics (e.g., education, prior experience treating trauma-exposed youth with non-TF-CBT interventions), treatment fidelity/adherence significantly moderated pre- to post-treatment improvement in client symptoms (i.e., youth-reported PTSD as measured by the UCLA Post-Traumatic Stress Disorder Reaction Index [PTSD-RI]; Steinberg et al., 2004). Namely, not only did the most adherent therapists typically have the cases with the *best* client improvements, but so too did the least adherent therapists generally have the *worst* improvements in their clients. This linear, positive adherence-outcome relation was observed across the entire spectrum of adherence to TF-CBT. Although replication and more experimental designs are necessary to fully establish causality, the above findings, both TF-CBT-specific and otherwise, suggest that protocol-specific adherence (and methods to improve said adherence) remains critical to optimal TF-CBT treatment outcomes.

Barriers and Methods to Improve General and Specific Adherence

Unfortunately, utilization of EBTs (including TF-CBT) remains a rarity, such that the vast majority of clients—particularly youth clients—in community-based settings do not receive EBTs (see Bruns et al., 2015; Herschell et al., 2010). Even in cases where EBTs are utilized, adherent use of such EBTs is scarce (e.g., Bearman et al., 2013; Durlak & DuPre, 2008; Ehrenreich-May et al., 2011; Henggeler, 2011; Lang et al., 2016, 2017; McLeod et al., 2019; Santa Ana et al., 2009; Shirk & Peterson, 2013; Sijercic et al., 2019; Southam-Gerow et al., 2008; Weisz et al., 2013), even with the field of implementation science pushing for improved dissemination and implementation over the last 2 decades (e.g., Aarons et al., 2014; Cohen & Mannarino, 2008; Chu et al., 2014; Durlak & DuPre, 2008; Fixsen et al., 2005; Garland & Schoenwald, 2013;

Henggeler & Sheidow, 2012; Lang et al., 2016; McLeod et al., 2013; Schoenwald & Garland, 2013; Southam-Gerow & McLeod, 2013). Indeed, research consistently shows that community-based settings vary widely in their fidelity to EBTs (e.g., Allen et al., 2012; Boxmeyer et al., 2008; Dane & Schneider, 1998; Deci et al., 1995; Durlak & DuPre, 2008; Shirk & Peterson, 2013) as well as fidelity-relevant contextual factors, such as organizational structure and climate, treatment-specific training, supervision, and consultation (e.g., Bearman et al., 2013; Carol & Rounsaville, 2010; Nadeem et al., 2013; Roth et al., 2010; Schoenwald et al., 2009). Furthermore, these studies have identified several salient barriers to general EBT adherence in community-based settings related to agency-, implementer-, client-, and intervention-level factors (e.g., clinician attitudes and experience, staff turnover, organizational climate, intervention complexity, funding and costs, relative lack of feasible and validated adherence measures; Aarons, 2005; Asgardy-Eden & Lee, 2012; Beidas et al., 2014, 2015; Greenhalgh et al., 2004; Greer et al., 2013; Lang & Connell, 2016; Land et al., 2017; Lee et al., 2015; Ramanadhan et al., 2012; Schoenwald et al., 2009; Weiner et al., 2009; see Allen et al. [2018] for a review).

Notwithstanding this panoply of barriers, the primary barrier to EBT adherence in community settings may be a lack of EBT training (Frank et al., 2019; Kilbourne et al., 2018; Weissman et al., 2006). Indeed, most community therapists have never received training in EBT(s) (Frank et al., 2019; Garland et al., 2010; Gyani et al., 2014; Shiner et al., 2013). This dissemination gap also applies to TF-CBT. Indeed, despite TF-CBT being considered a best-practice, gold standard of treatment for youth impacted by traumatic experiences (Chadwick Center for Children and Families, 2004; Leenarts et al., 2013), access to TF-CBT in community-based settings is limited at best (Deblinger et al., 2020).

Yet, even when community clinicians receive training in EBTs (including TF-CBT), community clinicians' adherence to said EBT often fails to reach benchmark levels of adherence of their university-based counterparts (Allen et al., 2012; Bearman et al., 2013; Ehrenreich-May

et al., 2011; Santa Ana et al., 2009; Southam-Gerow et al., 2008; Unterhitzenger et al., 2019). For example, Allen et al. (2012) examined TF-CBT adherence in community-based settings and found that only two-thirds of TF-CBT-trained therapists self-reported that they regularly implemented all of TF-CBT's components (with an even lower percentage for untrained clinicians). In contrast, self-reported adherence to the full TF-CBT protocol has been significantly higher in university-based setting (e.g., 82%; Unterhitzenger et al., 2019).

For TF-CBT, this discrepancy between community-based and university-based adherence is particularly pronounced for certain components. Namely, Allen et al. (2012) found that community clinicians reported significantly greater adherence to TF-CBT's general components (i.e., *psychoeducation* and *relaxation*) compared to its model-specific (i.e., *cognitive coping* and specifically cognitive restructuring), program-specific (i.e., *parenting* and behavioral parent training techniques), and protocol-specific components (i.e., *trauma narrative* and related conjoint caregiver-child sessions). More recently, Ascienzo et al. (2019) surveyed 85 community therapists who had been trained in TF-CBT and asked them to identify the TF-CBT component that they found most difficult to implement with their clients. Once again, clinicians identified TF-CBT's protocol- and/or program-specific practice elements versus its more general practice elements. Specifically, most clinicians (69.5%) identified the trauma narrative as either the most or second-most difficult component, with the next-most frequently identified component being parenting skills and its related behavioral parent training techniques. This same gap in community fidelity to TF-CBT's general versus specific components has been consistently found across samples (e.g., Becker-Haimes et al., 2017; Espeleta et al., 2021; Olatunji et al., 2009), which is particularly concerning given that research indicates a significant reduction in therapeutic benefit when these trauma-focused and protocol-specific components are excluded from TF-CBT implementation (Deblinger et al., 2011). Moreover, as the most effective treatments for children exposed to trauma are directive and exposure-based (Cohen et

al., 2009; Dorsey et al., 2017), it is critical that clinicians are trained not only *how* to use these components but *why* it is necessary to adherently use them (Ascienzo et al., 2019).

Consequently, researchers continue developing, validating, and implementing training and dissemination strategies that are both feasible and effective in sustaining therapist EBT competence and adherence within community-based settings (Beidas et al., 2012, 2019; Beidas & Kendall, 2010; Ebert et al., 2012; Frank et al., 2019; Helseth et al., 2020; Herschell et al., 2010, 2015; Pynoos et al., 2008; Rakovshik & McManus, 2010; Schoenwald et al., 2008, 2013; Weisz & Kazdin, 2010). Most commonly, clinical workshops are utilized to improve EBT adherence (Beidas & Kendall, 2010; Herschell et al., 2010; Rakovshik & McManus, 2010). However, empirical findings indicate that one-time workshops and/or self-study of treatment manuals may be necessary, but are by themselves insufficient to produce sustained, adherent implementation of EBTs (Bearman et al., 2017; Beidas et al., 2012; Beidas & Kendall, 2010; Dorsey et al., 2018; Dimeff et al., 2009; Fixsen et al., 2005; Frank et al., 2019; Herschell et al., 2010; Kavanagh et al., 2008; McHugh & Barlow, 2010; Schoenwald et al., 2004). As a result, increasing emphasis has been placed on multi-component, framework-guided implementation models. Such models expand upon the traditional workshop format by incorporating additional strategies and interventions that promote EBT adoption, implementation, and sustainment over time (e.g., expert consultation, training cases, booster and/or supervisor trainings, etc.; Beidas & Kendall, 2010; Calder et al., 2017; Herschell et al., 2010, 2015; Jackson et al., 2018; Nadeem et al., 2014; Powell et al., 2012; Proctor et al., 2013; Rakovshik & McManus, 2010). Despite the existence of various multi-component, framework-guided implementation models (e.g., breakthrough series collaborative, cascading model, distance education model; Calder et al., 2017; Herschell et al., 2010, 2015; Jackson et al., 2018; Martino et al., 2010, 2011), one of the most well-documented approaches to addressing both general and TF-CBT-specific adherence in community-based settings is the Learning Collaborative (LC) model (Ebert et al., 2012; Markiewicz et al., 2006; Nadeem et al., 2014, 2016).

Learning Collaboratives (LCs).

General aims, structure, and evidence. As previously noted, the LC is a multicomponent implementation model. Guided by a theoretical framework (e.g., Exploration, Preparation, Implementation, and Sustainment; EPIS; Aarons et al., 2011; Nadeem et al., 2013), LCs' primary goal is to "...attain rapid, measurable, and sustainable improvements in practice within a system of agencies" (Jensen-Doss et al., 2020). More specifically, LCs work to support change at multiple levels within an agency/organization (e.g., service providers, supervisors, and administrators), fostering a supportive infrastructure for learning, delivering, and sustaining EBPs (Hanson et al., 2018; 2019; Institute for Healthcare Improvement [IHI], 2003; 2004; Lang et al., 2015; Markiewicz et al., 2006; Nadeem et al., 2013; 2014; Sigel et al., 2013).

While LCs can vary structurally based on agency and/or targeted-EBP needs, a majority involve the following components. First, LC/EBP experts first identify agency leaders, participants, and targeted EBP(s), then administer preliminary exercises (i.e., pre-work), such as independent readings and online modules relevant to the EBP(s) of focus. These preliminary exercises work to 1) orient participants and 2) establish foundational knowledge for the EBP(s) of focus (IHI, 2017; Nadeem et al., 2014). Next are learning sessions (i.e., multi-day, in-person or synchronous online workshops involving EBP-focused didactics and experiential learning activities) to develop provider skills and address implementation barriers at both the individual and organizational levels (IHI, 2017; Markiewicz et al., 2006; Nadeem et al., 2013; 2014). Thereafter, LC participants practice implementing the LC-targeted EBP(s) in their agencies as part of action periods where LC participants continue to receive ongoing education and support via expert consultation, in-house supervision, and monitoring of quality improvement (e.g., client engagement and outcomes, clinician competence and adherence; Hanson et al., 2019; IHI, 2017; Markiewicz et al., 2006; Nadeem et al., 2013; 2014). While expert consultation allows participants the opportunity to discuss implementation of targeted-EBP(s) with training cases

and collaboratively problem-solve EBP-implementation obstacles (Nadeem et al., 2014), quality improvement metrics help to determine the type and intensity of education necessitated to support participants and their organizations in sustainably implementing targeted-EBPs overtime (Markiewicz et al., 2006; Nadeem et al., 2014).

Given the promise of this rigorous model, LCs are being utilized increasingly, with more than 35 statewide trials conducted in the US (Nadeem et al., 2014). Overall, results from these LCs support the model's efficacy and effectiveness. For example, LC trainees historically have found LCs to be both acceptable and feasible (e.g., Ebert et al., 2012; Haine-Schlagel et al., 2013; Katzelnick et al., 2005; Meredith et al., 2006; Roosa et al., 2011; Stephan et al., 2011; Strating & Nieboer, 2010; Vannoy et al., 2011; Versteeg et al., 2012). Past LCs' benefits include improved process of care and uptake of novel practices (e.g., Duffy et al., 2008; Ebert et al., 2012; Epstein et al., 2010a; Haine-Schlagel et al., 2013; Katzelnick et al., 2005; Meredith et al., 2006; Roosa et al., 2011; Stephan et al., 2011; Strating et al., 2010; Vannoy et al., 2011). More importantly, evidence suggests positive, large pre- to post-LC improvements in both client engagement (e.g., η_p^2 s = .27–.47; Cavaleri et al., 2006, 2010; Hoffman et al., 2008; McCarty et al., 2007; Roosa et al., 2011; Rutkowski et al., 2010; c.f., Gustafson et al., 2013) and client symptoms (e.g., d s = 1.45–1.70; Epstein et al., 2008; Epstein et al., 2010a; Katzelnick et al., 2005; Strating et al., 2012). Additionally, findings typically indicate these gains in practices and/or procedures are sustained, post-LC (e.g., Cavaleri et al., 2007; Ebert et al., 2012; Epstein et al., 2010b; Hoffman et al., 2008; Meredith et al., 2006; Stephan et al., 2011).

TF-CBT-specific. Over the past 2 decades, several TF-CBT-specific LCs have been conducted. Consistent with general LC outcome research, these LCs have produced promising evidence for TF-CBT dissemination and implementation within the context of the LC model. Indeed, notable outcomes include improvements in both clinician practices (including fidelity) and client functioning—as well as organizational factors that support these related targets, such as clinical supervision.

In regard to supervision practices, Cohen and Mannarino (2008) reported on an LC sponsored by the NCTSN, the TF-CBT Breakthrough Series Collaborative (BSC). This LC involved 12 NCTSN agency sites with 6–10 professionals per agency (i.e., 30 senior leaders, 30 supervisors, 70 therapists) and 485 TF-CBT clients. For supervisors, the LC included training on TF-CBT-specific supervisory practices. Pre- to post-LC, the number of sites offering regular supervision in TF-CBT reportedly doubled, and the quantity and quality of supervision allegedly increased—though the authors did not report how these variables were measured or any specific values.

Ebert and colleagues (2012) also utilized the LC model to disseminate TF-CBT, this time to 11 community mental health agencies and 109 of their staff (i.e., 18 agency administrators, 27 clinical supervisors, and 64 clinicians). In regard to supervision, clinical supervisors were asked, after the last learning session and during a 1-year follow-up, to retrospectively report on their “experience supervising TF-CBT at pre-LC, post-LC, and follow-up;” whereas, clinicians were surveyed on “the amount and type of TF- CBT supervision they had received during the past month” at post-LC and follow-up. Similar to Cohen and Mannarino (2008), Ebert et al., (2012) unfortunately did not provide any more details on how these variables were measured. Notwithstanding, Ebert et al. (2012) reported that the number of agencies reportedly offering regular (i.e., a minimum of biweekly) TF-CBT-focused supervision increased from five (50%) to nine agencies (90%), pre- to post-LC (once again, the authors did not report how “TF-CBT-focused supervision” was defined or why data were collapsed per agency versus per supervisor). At the 1-year follow-up, 10 of the 11 participating agencies (91%) reported providing at least 1 hour of TF-CBT supervision per month, while five agencies (45%) reported offering weekly TF-CBT supervision to their providers.

Adding to these promising if imprecise findings, Bunger and colleagues’ (2018) prospective study on clinicians’ advice-seeking further supports the notion that LCs may improve supervisee-supervisor interactions related to TF-CBT. Namely, they reported on a TF-

CBT-targeting LC that involved 32 community agencies and 206 of their staff. Of those staff, 126 completed a pre- and post-LC survey on self-reported general and TF-CBT-specific advice-seeking behaviors. Results indicated that both general and TF-CBT-specific advice-seeking relationship significantly increased, pre- to post-LC, between both (a) clinicians and external TF-CBT consultants and (b) clinicians and in-agency clinical supervisors. Although pre- to post-LC gains were larger for the former versus latter ties, data also suggested that professionals co-located within the same agency (versus different ones) were significantly more likely to form and/or maintain both general and TF-CBT-specific advice-seeking. Aside from—or perhaps partly due to—these improvements in supervision and related interprofessional behaviors, LCs also have evinced positive changes in clinicians' provision of clinical services.

In fact, independently conducted research indicates that TF-CBT-targeted LCs not only increases access to TF-CBT (Cohen & Mannarino, 2008; Ebert et al., 2012; Lang, 2017), but also increases agencies' readiness and ability to address trauma as a whole (Ebert et al., 2012; Lang, 2017). Additional research suggests LCs can improve clinicians' skills to reduce secondary stress and burnout. To elaborate, Deblinger and colleagues (2020) found that clinicians' ($n = 115$) utilization of coping skills increased significantly after a TF-CBT-specific LC that also included a trauma-informed "PRACTICE What You Preach" (PWYP) self-care focus. More specifically, they reported significant, small-to-medium pre- to post-LC improvements in clinicians' self-reported use of instrumental social support ($d = 0.26$), active coping ($d = 0.32$), humor ($d = 0.26$), and restraint ($d = 0.26$). Moreover, there was a significant, medium pre- to post-LC decrease in clinicians' self-reported secondary traumatic stress ($d = -0.34$).

Yet, even more germane to the current prospectus, preliminary evidence also supports the effectiveness of LCs in improving clinicians' fidelity to TF-CBT. For instance, Cohen and colleagues' (2008) prospective study reported an 85% increase in the number of clinicians who provided TF-CBT with "high fidelity" from pre- to post-LC—though the means by which fidelity was measured was not identified. Similarly, Stewart and colleagues (2020) reported that their

LC project trainers were able to correct errors in fidelity and thereby improve clinicians' adherence to TF-CBT, though no data were presented to support this claim. Fortunately, three other LC studies have assessed TF-CBT fidelity using standardized measures with specific reported values.

In Ebert and colleagues' (2012) previously mentioned study, fidelity was assessed retrospectively in two ways: 1) clinician self-report on a 49-item standardized measure of adherence (i.e., TF-CBT Practice-Checklist-Self Report; Deblinger et al., 2005) and 2) supervisor-ratings on a study-specific 11-item measure of clinicians' protocol-specific competence (i.e., TF-CBT Rating Form). Total scale scores on both measures had excellent internal consistency ($\alpha = .95$ and $.92$, respectively). Furthermore, clinician- and supervisor-ratings of TF-CBT fidelity significantly, positively correlated to a small-to-medium degree ($r = .28$, $p = .04$). Post-LC, seven out of 11 sites required regular evaluation of TF-CBT fidelity through clinician self-report and/or supervisor ratings. Based on those measures, self-reported clinician adherence was fair-to-good (mean score of 3.6 on a 1–5 Likert scale), and supervisor-reported clinician competence was good (mean score of 4.2 on a 1–5 Likert scale). Unfortunately, as this was a retrospective study, it did not prospectively assess or compare fidelity, pre- to post-LC.

Next, Amaya-Jackson and colleagues (2018) analyzed data from two TF-CBT-focused LC cohorts of the North Carolina Child Treatment Program. As part of this study, the authors assessed clinicians' TF-CBT-specific fidelity via trainer-ratings on the TF-CBT Fidelity and Clinical Competency Consultation Metric (Potter et al., 2008). This standardized measure was designed specifically for the project with the approval of TF-CBT's developers and consisted of 12-items that correspond with TF-CBT's core components (i.e., PRACTICE) as well as post-treatment assessment and termination practice elements. Based on consultation call interactions and reviewed clinical documentations, TF-CBT-trainers rated each clinical trainee on each of the 12 items using a 5-point Likert scale that combined protocol-specific adherence

and competence in TF-CBT (0 = “not addressed”, 4 = “addressed with fidelity and advanced clinical skill”). A subset of trainees were rated by two trainers to assess and demonstrate inter-rater reliability, with results indicating excellent concordance (93%). Scores were then averaged across the items to produce an overall measure of each trainee’s protocol-specific fidelity to TF-CBT during the LC. Clinical trainees participating in the LCs were required to meet a mean fidelity score equal to or greater than 2.0. Of those clinicians who met fidelity ($n = 77$; 62%), the mode fidelity score post-LC was 3.6, further supporting LCs’ ability to improve clinician TF-CBT fidelity. Also, as previously noted, these protocol-specific fidelity ratings significantly moderated clients’ PTS outcomes (i.e., pre- to post-treatment improvements in youth-reported PTS). Notwithstanding, the authors did not separately measure adherence and competence, and they only measured protocol-specific fidelity (and not general fidelity as well) at one timepoint during the LC.

Most recently, Deblinger and colleagues’ (2020) prospective LC study involved 115 clinicians and supervisors from 19 agencies and five training cohorts, who completed a TF-CBT-LC augmented with trauma-informed self-care curriculum. To assess LC-related changes in TF-CBT fidelity, online surveys were administered pre- and post-LC with separate standardized measures to explicitly measure TF-CBT adherence and competence. Adherence was assessed with the TF-CBT PRACTICE Fidelity Checklist (Deblinger et al., 2014). Derived from the TF-CBT Practices Scale (TPS; Hanson et al., 2019), this 48-item self-report measure assesses clinicians’ adherence to TF-CBT’s general and protocol-specific practice elements using a 5-point Likert scale (i.e., “never” to “almost always”). Competency, in turn, was assessed with the TF-CBT Competency Self-Report Survey (CARES Institute, 2014), a 20-item self-report measure of a clinician’s perceived competence in TF-CBT-relevant general and protocol-specific practice elements (e.g., identifying appropriate cases, balancing flexibility with adherence to protocol, adapting protocol to varying trauma types). Items used a 5-point scale of self-efficacy with TF-CBT practice elements, ranging from “not at all” to “exceptionally” in regard

to how competent a trainee felt in implementing TF-CBT-specific skills. Both measures evinced excellent internal consistency across timepoints (α s = .95–.97). Moreover, results indicated significant, large pre- to post-LC increases in clinician-reported TF-CBT adherence ($d = 0.92$) and competence ($d = 1.58$). Despite these promising results, the authors did not separately report on general versus specific adherence or competence. Regardless, this growing literature demonstrates that LCs may strongly benefit clinicians and other mental health professionals—particularly in regards to TF-CBT fidelity.

Likely as a product of the above improved supervisor and clinician practices, TF-CBT-treated clients and their families also have greatly benefitted from LCs (Amaya-Jackson et al., 2018; Barnett et al., 2019; Cohen et al., 2016; Deblinger et al., 2020; Lang et al., 2015; Stewart et al., 2020). For example, the aforementioned retrospective study authored by Cohen and Colleagues (2008) reported improved post-LC family engagement in TF-CBT, as assessed by caregiver participation in TF-CBT, average number of attended TF-CBT sessions, and clinician ratings of family involvement in TF-CBT. Yet, even more convincingly, five studies have *prospectively* measured changes in client functioning during the course of TF-CBT-targeted, community-implemented LCs, via well-validated standardized client- and caregiver-report measures (i.e., Amaya-Jackson et al., 2018; Cohen et al., 2016; Deblinger et al., 2020; Lang et al., 2015; Stewart et al., 2020). All five found significant, large pre- to post-TF-CBT reductions in youth-reported PTS ($d = 0.81$ – 2.04 ; Amaya-Jackson et al., 2018; Cohen et al., 2016; Deblinger et al., 2020; Lang et al., 2015; Stewart et al., 2020). Of the four studies that also assessed clients' PTS via caregiver-report, three found significant, large pre- to post-treatment reductions ($ds = 1.12$ – 2.23 ; Amaya-Jackson et al., 2018; Deblinger et al., 2020; Stewart et al., 2020); whereas, one found a significant, moderate reduction ($d = 0.54$; Lang et al., 2020).

Beyond PTS, other clinical outcomes found during TF-CBT-focused LCs were significant, large pre- to post-treatment reductions in internalizing symptoms ($d = 0.83$; Deblinger et al., 2020), including large decreases in youth anxiety (youth-report: $d = 1.67$

[Stewart et al., 2020], caregiver-report: $d = 1.91$ [Stewart et al., 2020]) and medium-to-large decreases in youth depressive symptoms (youth-report: $ds = 0.47–1.68$ [Amaya-Jackson et al., 2018; Cohen et al., 2016; Lang et al., 2015; Stewart et al., 2020], caregiver-report: $ds = 0.55–2.28$; [Lang et al., 2015; Stewart et al., 2020]). When measured, externalizing symptoms also significantly reduced pre- to post-treatment to a moderate degree ($d = 0.56$; Deblinger et al., 2020). Overall child psychosocial functioning improved to a large, significant degree per caregiver-report ($d = 0.96$; Amaya-Jackson et al., 2018; Deblinger et al., 2020), as did caregivers' self-reported psychosocial functioning (Amaya-Jackson et al., 2018). Notably, these positive results were achieved in diverse clinical settings, including residential treatment facilities (Cohen et al., 2016) and El Salvadorian schools and community-based mental health clinics (Stewart et al., 2020). Additionally, these LCs' clinical outcomes are consistent with those obtained during TF-CBT efficacy trials—while better than those of recent, non-LC community evaluations (e.g., Rudd et al., 2019).

Indeed, research directly comparing implementation models increasingly support the superior efficacy of the LC, particularly for TF-CBT. For example, Sprang and colleagues' (2019) surveyed 119 clinicians who participated in one of three dissemination models (i.e., training-only, 2-day training plus ongoing consultation calls, and LC model) for one of three EBTs (i.e., Functional Family Therapy, and Encompass CBT+). These clinicians represented various mental health professions (i.e., social work [51.3%], psychology [13%], counseling [25.9%], and other disciplines [3.7%]) and completed a 70-item implementation survey at approximately 18-months post-training/LC. Results indicated that training format had a significant, medium influence on clinicians' self-reported EBT use ($r = .39$), adherence ($r = .36$), and sustainment ($r = .29$), with those in the LC condition consistently outperforming those in the training-only condition across the three aforementioned variables (i.e., EBT use, adherence, sustainment). Regretfully, this study was not without its limitations, including its use of retrospective self-reports and analyses that did not differentiate between the three EBTs (i.e.,

the study did not provide TF-CBT-specific results). Nevertheless, other studies have focused more precisely on TF-CBT dissemination and implementation.

For instance, Ascienzo and colleagues (2019) reanalyzed the above data using only those who were trained in TF-CBT and once again found that training format (i.e., LC, training with consultation, and training only) still predicted TF-CBT-specific clinician outcomes. Namely, responses from TF-CBT-trained clinicians ($n = 85$; a majority of which [49.4%] were employed by community mental health agencies) indicated significant, large relations between training format and clinicians' self-reported engagement with TF-CBT training (Cramér's $V = .59$), confidence with delivering TF-CBT ($V = .61$), and sustainability of TF-CBT at both the provider and agency level ($V = .56$ and $.52$), respectively. Notably, LC-trained therapists reported the highest levels of engagement with TF-CBT training and the second-highest levels of TF-CBT confidence and sustainability. Moreover, training format had a significant, large relation with clinicians' self-rated adherence to TF-CBT ($V = .62$), with those in the LC condition reporting the highest levels of TF-CBT adherence. Notwithstanding these promising results, this study, like Sprang et al. (2019), also relied on retrospective data collection, measured adherence using a single question (i.e., "How closely do you follow the intervention model?"), and did not randomly assign clinicians to different training models.

In contrast, Cohen and Colleagues' (2016) prospective study assigned 66 community clinicians from 18 residential treatment facilities to either (1) a web-based TF-CBT training with consultation model or (2) an LC. Clients were 12–17-year-old adjudicated youth from one of 18 participating residential treatment facilities. Clinicians in the LC group had the highest rates of case completion (>83%). Results also suggested the LC condition was associated with significantly greater treatment engagement ($r = .32$) than the control condition. Furthermore, LC-trained clinicians conducted significantly more trauma screenings than in the control condition ($r = .30$), suggesting greater engagement in trauma-focused practices. Of particular note, the LC condition also had significantly higher rates of expert-rated TF-CBT adherence (i.e., completing

all TF-CBT components in their prescribed order and pacing), both for overall cases and completed cases, to a moderate-to-large degree ($r = .54$ and $.44$, respectively).

Notwithstanding these positive results, both in general and specific to TF-CBT, LCs have their limitations. Apart from inconsistent completion rates (e.g., 16%–73% of LC trainees drop-out or fail to finish all LC requirements; Amaya-Jackson et al, 2018; Beveridge et al., 2015; Ebert et al, 2012; Fritz et al, 2013; Gleacher et al., 2011; Lang et al., 2015; Olin et al., 2016), LCs do not directly address or promote interprofessional collaboration (IPC) *across* agencies (Palinkas et al., 2014). Instead, LCs typically involve singular agencies from the same service sector (Hanson et al, 2018, 2019). Although the standard LC model can increase intra-agency collaboration and the *supply* of EBT-trained clinicians, the impact on the overall service system within a community may be hindered, as LCs do not also target or improve *demand* for those EBTs (Hanson et al, 2018, 2019). That is, other service sectors involved in mental health care (e.g., schools, juvenile justice system, child protective services) are not adequately informed when it comes to EBTs or the resources available to those they serve. Subsequently, referrals to EBT-providing mental health agencies are less likely to be made, collaboration between agencies is likely to remain low, and monitoring of services may fall short (Hanson et al, 2018, 2019). One potential method to ameliorate these limitations is a novel augmentation of the LC model, the Community-Based Learning Collaborative (CBLC).

CBLC. The CBLC was developed for Project BEST (Bringing Evidence-Supported Treatments to South Carolina Children and Their Families; www.musc.edu/projectbest), “...a multi-phase statewide initiative to promote trauma-focused practices” (Hanson et al., 2019). Specifically, the CBLC model strives to increase both the availability and use of EBPs in community-based settings (Hanson et al., 2016, 2018, 2019; Helseth et al., 2020; Saunders & Hanson, 2014). The CBLC model is unique in that it augments classic LC activities by incorporating community-focused strategies within both clinical and non-clinical settings (Hanson et al., 2019). In addition to involving clinicians and senior leaders, CBLCs also include

professionals (and their organizations) within a targeted community who do not directly provide clinical interventions but rather are responsible for identifying and referring those in need of mental-health services (e.g., child welfare workers, juvenile justice workers, school counselors, victim advocates; Hanson et al., 2016, 2018, 2019; Saunders & Hanson, 2014). Incorporation of these professionals (referred to as brokers in the CBLC model) not only increases the awareness of available EBPs but also promotes an understanding of their importance, specifically in the context of childhood trauma. Moreover, because the CBLC model was designed with the inclusivity of multiple community agencies in mind as well as related evidence-based practices (e.g., information sharing, goal consensus, mutual trust, and respect; Aarons et al., 2014; Chaudoir et al., 2013; Durlak & DuPre, 2008; Palinkas et al., 2014), it directly addresses problems related to inter-agency IPC. Therefore, the CBLC comports with previous research which indicates that greater IPC between child welfare and mental health service organizations can enhance service access, mental health treatment use, and treatment outcomes (Bai et al., 2009; Chuang & Lucio, 2011; Glisson & Hemmelgarn, 1998; Hanson et al., 2018; Hurlburt et al., 2004; Palinkas et al., 2014).

In recent years, studies have increasingly validated the CBLC's effectiveness at bettering TF-CBT implementation in community settings. For example, Hanson and colleagues (2019) retrospectively examined the utility of the CBLC by analyzing data from six CBLC cohorts of Project BEST and their 639 participants. Post-CBLC, participants rated the degree to which nine specific CBLC components (e.g., learning sessions, action periods, consultation calls, metrics) helped them learn and implement practical skills for their specific track (i.e., clinician, broker, or senior leader). Each component was rated on a 5-point scale (i.e., 1 = "not useful", 5 = "extremely useful"). Results indicated approximately 69% of respondents rated all components as "very" or "extremely useful". Further supporting the CBLC's feasibility and acceptability, Hanson and colleagues (2019) found that CBLC participants, compared to participants in a similar TF-CBT-focused LC (i.e., Ebert et al., 2012), had significantly higher

rates of attending learning session and consultation calls, both to a moderate degree ($h = .60$ and $.72$, respectively).

Aside from general perceptions of utility and indications of feasibility, research also suggests that the CBLCs may address some of the barriers preventing clients and their families from receiving evidence-based trauma-treatments—particularly TF-CBT. To elaborate, Hanson and colleagues (2018) utilized a 13-item self-report measure, specifically developed for this study, to prospectively assess perceived prevalence of commonly occurring barriers to TF-CBT and similar evidence-based trauma treatment for youth (e.g., not enough trained clinicians, insurance not covering EBTs, brokers being unaware of EBTs, etc.). Results indicated a significant, large reduction in clinician-reported treatment barriers, pre- to post-CBLC ($\eta_p^2 = .25$). Moreover, these CBLC-related reductions significantly mediated the relation between significant, large pre- to post-CBLC gains in clinician-reported interorganizational collaboration ($\eta_p^2 = .17$) and significant, large pre- to post-CBLC increases in community utilization and completion of evidence-based trauma treatment for youth and their families ($\eta_p^2 = .17$).

Other organizational benefits of CBLC were identified by Helseth and colleagues (2020) in their prospective study of 492 clinicians, 218 brokers, and 139 senior leaders from 10 TF-CBT-focused CBLCs. Perceived organizational support for TF-CBT significantly improved pre- to post-CBLC, based on responses from both clinicians ($d = 0.48$) and senior leaders ($d = 1.01$), and these gains were significantly sustained during a 2–4-year follow-up assessment. During this follow-up timepoint, perceived organizational support for evidence-based practices in general also significantly improved ($d = 0.24$).

Particularly germane to the present study, research also has examined CBLCs' impact on TF-CBT adherence. For example, in the aforementioned study conducted by Hanson and colleagues (2019), the researchers prospectively investigated pre- to post-CBLC changes in clinicians' adherence to both general and TF-CBT-specific practices, as assessed by the TF-CBT Practices Scale (TPS). Derived from the Clinical Practices Questionnaire (Deblinger et al.,

2005), the TPS is a 44-item, clinician self-report measure of adherence to TF-CBT-indicated and -contraindicated practice elements. Based on TPS scores, clinicians significantly increased their overall adherence to TF-CBT, pre- to post-CBLC, to a large degree ($\eta_p^2 = .23$). However, gains in self-reported adherence varied significantly by practice elements, such that moderate adherence improvements occurred for psychoeducation ($d = 0.68$), gradual exposure ($d = 0.57$), and coping practices ($d = 0.52$); whereas, significant but small improvements occurred for personal safety ($d = 0.43$), behavior management ($d = 0.38$), and general clinical skills ($d = 0.26$). Apart from clinicians, brokers' adherence to evidence-based trauma-informed practices (as measured by the 29-item Broker Trauma Practices Scale) also significantly improved, pre- to post-CBLC, to large degree ($\eta_p^2 = .23$), with notable gains in brokers' self-reported use of evidence-based trauma assessment ($d = 0.68$), psychoeducation ($d = 0.43$), and multidisciplinary collaboration ($d = 0.46$). Moreover, senior leaders' adherence to role-specific, evidence-based practices also improved after the CBLC, per their retrospective self-report (as measured by the 13-item Senior Leader Practices Scale), with approximately 76% of senior leaders reporting that the CBLC improved all 13 practices either "a lot" or a "great deal". Finally, Helseth and colleagues (2020) also found significant, moderate pre- to post-CBLC gains in clinicians' self-reported adherence to TF-CBT (i.e., TPS scores; $d = 0.62$) that were significantly sustained 2–4 years at a follow-up assessment.

Despite this promising evidence, the CBLC model needs further validation. For example, no extant study of a CBLC has studied explicitly how the model increases clinician adherence, either general or specific. Notwithstanding, one potential mechanism that may be responsible, at least in part, for CBLC-related improvements in general and protocol-specific adherence is supervision (Hanson et al., 2019; Helseth et al., 2020).

Supervision

Indeed, clinical supervision is increasingly being posited and tested as an implementation strategy to increase, improve, and sustain EBP use, particularly in community

settings (Alfonsson et al., 2017; Bearman et al., 2013, 2017; Chorpita & Regan, 2009; Fairburn & Cooper, 2011; Herschell et al., 2010; Lucid et al., 2018; Milne, 2009; Milne & Reiser, 2012; Roth et al., 2010; Schoenwald et al., 2008, 2013). In fact, supervision is typically viewed if not mandated as an essential, irreplaceable element of both psychotherapist training and on-going practice (Alfonsson et al., 2017; Association for Counselor Education and Supervision Taskforce on Best Practices, 2011; Bearman et al., 2017; Bernard & Goodyear, 2014; Fouad et al., 2009; Freitas, 2002; Herschell et al., 2010; Kaslow et al., 2004; Liness et al., 2019; Milne et al., 2008; Rousmaniere et al., 2016). Notwithstanding, supervision—and specifically in-house or workplace supervision—remains one of the least studied implementation factors for improving clinician fidelity and related EBT client outcomes (Accurso et al., 2011; Bearman et al., 2013, 2017; Chorpita & Regan, 2009; Dorsey et al., 2013, 2018; Lucid et al., 2018; Milne et al., 2010; Pullman et al., 2018; Schoenwald et al., 2008, 2009, 2013; Wheeler & Richards, 2007). This surprising state of the literature can be attributed largely to supervision’s multifaceted nature and its plethora of definitions, goals, formats, content, techniques, guidelines, and related measurement and methodological issues; all of which have informed—or sometimes obfuscated—the empirical relation between supervision and clinician and client outcomes (Alfonsson et al., 2017, 2018; Bearman et al., 2017; Falender & Shafranske, 2014; Lucid et al., 2018; Milne, 2007).

Definitions and Goals

As noted above, an array of definitions for clinical supervision exists currently, making it challenging for researchers and practitioners to study, learn, and practice effective clinical supervision (Bernard & Goodyear, 2014; Falender & Shafranske, 2014; Milne, 2007; Pullman et al., 2018). Exacerbating this challenge is the degree to which many of these definitions have been imprecise and/or non-inclusive, failing to specify essential objectives and elements, differentiate from other training or practice activities, operationalize to permit measurement, and corroborate with empirical data (Bernard & Goodyear, 2004; Falender & Shafranske, 2014;

Milne, 2007; Powell & Brodsky, 2004). For example, some definitions have focused only on supervision's typology, while others have highlighted its functionality (Falender & Shafranske, 2014; Milne, 2007). Despite these differences, more recent definitions of supervision (APA, 2014; Association of State and Provincial Psychology Boards [ASPPB], 2015, 2019; Bernard & Goodyear, 2014; Milne, 2007) demonstrate growing conceptual consensus and clarity.

Namely, most researchers, practitioners, and related experts by and large currently regard clinical supervision as a formal, relationship-based, evaluative, ongoing intervention in which the supervisor facilitates the supervisee's development of clinical knowledge, skills, and practices in order to ensure quality service provision and attainment of agency- and profession-level goals and standards (Alfonsson et al., 2017, 2018; APA, 2014; ASPPB, 2015, 2019; Bernard & Goodyear, 2014; Kavanagh et al., 2008; Milne, 2007; Pullman et al., 2018; Scaife & Inskipp, 2001; Spence et al., 2001). More specifically, supervisory objectives have been classified trichotomously as "normative" (i.e., quality control of supervisees' client outcomes), "restorative" (i.e., fostering emotional support and processing for supervisees), and "formative" (i.e., facilitation of supervisee professional development; Bearman et al., 2017; Milne, 2007). That said, most definitions focus on formative goals as proximal targets of supervision and normative goals as distal targets. To elaborate, clinical supervision is meant to promote supervisee-therapists' professional development, and thereby increase the fidelity of their implemented practice, which in turn, should protect client welfare and improve their clinical outcomes and well-being (Alfonsson et al., 2017, 2018; Falender & Shafranske, 2004; Wampold & Holloway, 1997; Watkins et al., 2011). Stated differently, supervision is an implementation strategy that can (or at least should) positively moderate the relation between initial EBP training and in situ EBP implementation (i.e., adoption, fidelity, and sustainment; Powell et al., 2012; Pullman et al., 2018).

This latter conceptualization also helps to distinguish supervision from other implementation activities. For example, clinical courses and workshops also aim to formatively

educate and evaluate clinicians on intervention and/or assessment knowledge, skills, techniques, and practice elements, but they do not *directly* support clinicians in ongoing implementation of said competencies and practices with actual clients (Alfonsson et al., 2017, 2018; Wampold & Holloway, 1997). Similarly, informal mentoring and peer consultation may provide or augment clinical education and training (even with direct service provision), but they—unlike clinical supervision—lack a formal evaluative component (Milne, 2007). Lastly, clinical supervision may provide emotional support to a supervisee (i.e., restorative functions), but its ultimate aim is the emotional welfare of supervisees' clients, not supervisees—i.e., supervision is not therapy, nor is the supervisory alliance intended to be a therapeutic relationship (Hoge et al., 2011; Milne, 2007).

Apart from these differentiations, clinical supervision can be separated into two different categories. The first is clinical or expert consultation, whereby EBP experts external to an agency provide recurrent support to agency clinicians providing services to clients (Cox et al., 2018; Beidas et al., 2012; Dorsey et al., 2018; Edmunds et al., 2013; Nadeem et al., 2013). Although expert consultation has become a best practice implementation strategy for improving EBP fidelity (e.g., Bearman et al., 2013, 2017; Beidas et al., 2012; Creed et al., 2016; Edmunds et al., 2013; Funderburk et al., 2015; Lucid et al., 2018; Miller et al., 2004; Stirman et al., 2015), its cost compromises its feasibility and sustainability (Herschell et al., 2010; Lucid et al. 2018; Massatti et al., 2008; Stewart et al., 2016; Stirman, 2012). Consequently, some EBP and implementation experts have suggested that the other form of clinical supervision—i.e., workplace-based supervision—might be a more naturally occurring, lower-cost implementation strategy to improve and sustain EBP fidelity and outcomes (Dorsey et al., 2013, 2017; Lucid et al., 2018; Pullman et al., 2018). In contrast to expert consultation, workplace-based supervision (otherwise known as in-house supervision) involves an extant, more experienced clinician or professional already employed by an organization to supervise one or more of said

organization's clinicians (Dorsey et al., 2018; Hoge et al., 2011; Lucid et al., 2018). This form of clinical supervision—hereto referred simply as supervision—is the focus of the present study.

Formats and Techniques

In terms of format and techniques, supervision delivery varies widely, both in recommended models and in actual practice (Accurso et al., 2011; Alfonsson et al., 2017, 2018; Cummings et al., 2015; Dorsey et al., 2018; Edmunds et al., 2011; Milne et al., 2008, 2011; Milne & Reiser, 2017; Nakamura et al., 2014). Format-wise, supervision can be conducted individually or in group settings, and either way can occur in-person or remotely via mediating technology (e.g., phone, video conferencing, or similar synchronous or asynchronous telehealth media; Alfonsson et al., 2017; Falender et al., 2004, 2014; Frankel & Piercy, 1990). Additionally, supervision may occur retrospectively (e.g., discussing case reports, listening to archived audio recordings, and/or watching video recordings of past sessions), prospectively (i.e., discussing future cases and next-session implementation activities and techniques), and/or concurrently (i.e., live supervision where the supervisor is present and able to provide in vivo feedback during a supervisee's psychotherapy session; Bartle et al., 2009; Jakob et al., 2013; Rousmaniere & Frederickson, 2013; Tanner et al., 2012; Weck et al., 2015; West et al., 1993). Various live supervision formats exist, including co-therapy (i.e., supervisor models and provides feedback to a supervisee in the direct presence of a client during a session), knock-on-door supervision (i.e., supervisor remotely observes a session and occasionally knocks on the door of the therapy room [or provides a similar signal] and provides feedback outside of the therapy room), bug-in-the-ear (i.e., supervisor observes a session indirectly [e.g., one-way mirror, synchronous videoconferencing or audio stream] and communicates vocally with the supervisee with some facilitative audio medium [e.g., telephone, ear-piece]), and bug-in-the-eye supervision (i.e., supervisor remotely observes session and provides textual feedback to a supervisee through a visual display that is otherwise not visible to clients; Carmel et al., 2016; Kivlighan et al., 1991; Klitzke & Lombardo, 1991; Smith et al., 2012; Thurber, 2005; Weck et al., 2015).

Related to, yet distinct from, these formats are the numerous, discrete supervisory techniques or activities identified by clinical experts (Dorsey et al., 2018; Edmunds et al., 2013; Milne et al., 2011; Nakamura et al., 2014) and/or empirical research (Accurso et al., 2011; Milne et al., 2008; Milne & Reiser, 2017). The most common supervision techniques across treatment and theoretical models are: agenda setting, supportive listening, information-gathering, didactic instruction, provision and/or review of clinical suggestions, elicitation, collaborative problem-solving, review of progress notes, and assignment and review of additional training/learning resources (i.e., supervisee homework; Alfonsson et al., 2018; Dorsey et al., 2018; Falender et al., 2004, 2014). Overall, these common or general supervision techniques reflect parallel therapeutic counterparts (Alfonsson et al., 2017; 2018; Barker & Hunsley, 2013; Cummings et al., 2015; Rosenbaum & Ronen, 1998; Spence et al., 2001), and by and large, these general techniques and their related conceptualizations have not changed in several decades (Alfonsson et al., 2017; Beck et al., 2008; Liese & Beck, 1997; Padesky, 1996).

In contrast, more recent literature has emphasized a new “gold standard” set of supervision techniques (Bearman et al., 2013, 2017; Dorsey et al., 2018; Edmunds et al., 2013). These techniques include symptom monitoring, review of actual supervisee-client sessions via audio/video recording or in-vivo observation and feedback, standardized fidelity/adherence assessment, supervisor modeling of clinical practice elements and related techniques, and behavioral rehearsal of practice elements by supervisees; Alfonsson et al., 2018; Bearman et al., 2013, 2017; Beidas et al., 2014; Dorsey et al., 2018; Edmunds et al., 2013; Gross et al., 2014; Lambert & Shimokawa, 2011; Reese et al., 2009; Sheidow et al., 2008; Schoenwald et al., 2009). The latter technique of behavioral rehearsal—especially when paired with immediate supervisor feedback—has been referred to as active or experiential learning (Bearman et al., 2013, 2017; 2017; Dorsey et al., 2018; Edmunds et al., 2013; Ford & Weissbein, 1997; Rosenbaum & Ronen, 1998). Congruent with well-validated basal learning theories, active learning techniques (when regularly and appropriately used) are believed to improve clinician

fidelity and client outcomes (Alfonsson et al., 2018; Bearman et al., 2013, 2017; Beidas et al., 2014; Edmunds et al., 2013; Schoenwald et al., 2009; Sheidow et al., 2008; see section below for a review of literature supporting this position). Yet, supervisory formats and techniques only entail *how* a supervisor evaluates and teaches supervisees; they do not determine or explain *what* a supervisor is evaluating and/or teaching.

Content and Intensity

Supervisory content refers to the information, clinical skill(s), and/or practice element(s) covered in supervision (Dorsey et al., 2018; Edmunds et al., 2013; Pullman et al., 2018).

Content can be administrative (e.g., teaching how to bill insurance or use an electronic record system) or clinical (Accurso et al., 2011; Bearman et al., 2017; Carroll & Rounsaville, 2007; Dorsey et al., 2017, 2018; Hoge et al., 2011; Pullman et al., 2018; Schoenwald et al., 2013).

Clinical content, like adherence, can be *general* (i.e., apply to many treatment models, programs, and/or protocols) or *specific* (i.e., pertain to only one model, program, or protocol, such as TF-CBT; Alfonsson et al., 2018; Dorsey et al., 2018; Follette & Callaghan, 1995; Gonsalvez et al., 2016; Pullman et al., 2018; Rosenbaum & Ronen, 1998; Schoenwald et al., 2009; Sheidow et al., 2008; Turner et al., 2016).

Much like general fidelity, general supervision content focuses on supervisees' competent adherence to practice elements that are broadly applicable across interventions (e.g., therapeutic alliance-building, promoting positive expectancies, focusing treatment, instigating change, responsiveness, and multicultural competency; Barth et al., 2012; Blackburn et al., 2001; Brown et al., 2018; Castonguay & Beutler, 2006; Grencavage & Norcross, 1990; Hanson et al., 2019; Kazantzis et al., 2000, 2010; Mausbach et al., 2010; McLeod et al., 2016; Norcross, 2002; 2011; Mueser et al., 2008; Kirsch et al., 2018; Ormhaug et al., 2014; Ovenstad et al., 2020). For TF-CBT-delivering supervisees, general supervision content could entail a supervisor asking supervisees about their therapeutic alliance with their clients, modeling how to collaboratively set session agendas with clients, and discussing whether supervisees assigned

homework for clients and/or reviewed treatment goals. Additionally, general supervision content includes topics more indirectly related to supervisee-client interventions, such as supervisory working alliance relationships, supervisee self-care, addressing supervisee feedback, and boundary-setting (ASPPB, 2019). Of the above examples, the supervisory alliance—and its collaborative focus on goal identification and achievement—has been described as the most important component of a positive supervisory experience (Ellis, 1991; Falender & Shafranske, 2014). Yet, notwithstanding the posited and/or empirically validated importance of general content in supervision (see supervision research summary below), the degree to which supervision also focuses on competent, adherent delivery of protocol-specific EBPs (i.e., *specific* versus *general* supervision content) is critical (Alfonsson et al., 2018; Bearman et al., 2017; Dorsey et al., 2018; Follette & Callaghan, 1995; Gonsalvez et al., 2016; Pullman et al., 2018; Rosenbaum & Ronen, 1998; Schoenwald et al., 2009; Sheidow et al., 2008; Turner et al., 2016).

As mentioned above, specific clinical content in supervision focuses on supervisees' competent use of protocol/program-specific and/or -differentiating practice elements (which are presumably evidence-based). Recent proposed supervision models—including those applied to TF-CBT—suggest that supervision is an implementation strategy that moderates the relation between EBT training and EBT implementation, and supervision's effectiveness in this respect is *positively* moderated by the degree to which supervision content is specific and *negatively* moderated by the degree to which its content is general and/or administrative (Dorsey et al., 2017; Lucid et al., 2018; Pullman et al., 2018; Roth et al., 2010; Schoenwald et al., 2009; Sheidow et al., 2008). In the case of TF-CBT, specific content includes supervision techniques that focus on teaching, modeling, rehearsing, implementing, and/or reviewing TF-CBT's differentiating elements such as explicit exposure components (e.g., managing caregiver reactions to in-session trauma narrative work, assigning and reviewing clients' between-session in vivo exposures) and trauma-related safety enhancement components (Dorsey et al., 2018;

Lucid et al., 2018; Pullman et al., 2018). Additionally, TF-CBT-specific supervision content can involve supervisory techniques focusing on supervisees implementing non-differentiating CBT elements in a trauma-sensitive manner (e.g., allowing a child to keep their eyes open during relaxation components, doing implicit trauma exposures during affect identification techniques, correctly administering and interpreting trauma-specific and sequelae-related assessment measures), and flexibly tailoring TF-CBT components in a way that addresses clients' developmental, diagnostic, cultural, and social needs while maintaining fidelity to TF-CBT's core components and values (Dorsey et al., 2018; Pullman et al., 2018). Ultimately, specific supervision content (like its general counterpart) varies not only in its targeted practice element(s) (as well as utilized supervision formats and/or techniques; e.g., role-plays versus didactics), but also in its *intensity*.

To elaborate, intensity refers to the frequency (e.g., amount and/or proportion of time) and thoroughness (e.g., briefly mention versus detailed review) that specific practice elements are covered during supervision (Accurso et al., 2011; McLeod & Weisz, 2010; Pullman et al., 2018). To give an example germane to TF-CBT, high intensity coverage of the trauma narrative component (i.e., protocol-specific content) could involve detailed supervisor-supervisee discussion and video-review of trauma narrative work in prior sessions as well as in-depth discussion, modeling, and role-play of trauma narrative techniques for a following session. In contrast, low intensity coverage of trauma narrative content might entail only a brief mention of the component (e.g., "It may be time to start the trauma narrative"; Pullman et al., 2018). Low intensity coverage of EBT-specific content is unlikely to provide adequate fidelity monitoring or support—and thus result in EBT adoption, implementation, and sustainment insufficient to achieve optimal client outcomes (Bearman et al., 2017; Henggeler, 2002; Pullman et al., 2018). This is especially true for EBT practice elements that supervisees are less likely to engage in (Garland et al., 2010), particularly those techniques that clinicians find challenging (e.g., behavior management, cognitive processing, and exposure; Allen et al., 2012; Ascienzo et al.,

2019; Forgatch et al., 2013; Hanson et al., 2014). Thus, it may be the case that such TF-CBT-related content requires more intense coverage in supervision (Dorsey et al., 2018). All that said, there must be time to allow for such coverage, both in terms of frequency and duration of supervision sessions. Consequently, researchers have studied supervision's efficacy in relation to not only the *quality* of supervisory content and techniques, but also its *quantity*.

Empirical Research on Supervision

Consistent with supervision's "core" role in the field of mental health (Falender et al., 2004), anecdotal examples of supervision's critical role in EBP implementation exist in spades (Murray et al., 2010; Reinke et al., 2012; Woo et al., 2013). Yet, empirical research on supervision—both normative and optimal—has significant gaps (Accurso et al., 2011; Alfonsson et al., 2017, 2018; Bearman et al., 2017; Chorpita & Regan, 2009; Dorsey et al., 2013; Hoge et al., 2011; Lucid et al., 2018; McLeod et al., 2019; Milne et al., 2010; Pullman et al., 2018; Schoenwald et al., 2009, 2013; Watkins, 2014; Wheeler & Richards, 2009). Indeed, the majority of supervision research has been descriptive and/or exploratory, largely focusing on relational factors between supervisors and supervisees without explicit examination of how supervisor behavior affects clinician practices and/or client outcomes (Ellis et al., 1996; Hoge et al., 2011; Lucid et al., 2018). Of the more limited studies of supervision's impact on clinicians' and clients' behaviors, most have been substandard at best, with significant methodological deficits (e.g., inadequate reporting of power analyses, limited utilization of randomization procedures, lack of controls; neglected reporting of negative effects, overreliance on retrospective self-report data, use of psychometrically weak and/or unvalidated measures) that produce unclear and/or uncertain findings (Alfonsson et al., 2017, 2018; Bearman et al., 2017; Ellis et al., 1996; Freitas, 2002; Milne & James, 2000; Milne et al., 2008; Olds & Hawkins, 2014; Rousmaniere et al., 2016; Watkins, 2011; Wheeler & Richards, 2007). Additionally, few of these studies have examined workplace supervision's impact on EBT-specific implementation (Accurso et al., 2011; Lucid et al., 2018; Pullman et al., 2018; Schoenwald et al., 2009).

Indeed, multiple systematic reviews of supervision research have confirmed this relative scarcity of high-quality and EBT-specific empirical studies (e.g., Alfonsson et al., 2018; Ellis et al., 1996; Milne & James, 2000; Watkins, 2011; Wheeler & Richards, 2007). Notwithstanding this dearth, most reviews also have reported that the preponderance of extant studies support the efficacy of supervision in improving clinician practices, if not also client outcomes (e.g., Milne, 2007; Milne & James, 2000; Watkins, 2011; Wheeler & Richards, 2007). For example, Milne's (2007) review of 24 supervision-implementation studies found that the vast majority of those studies' supervision effects were positive for both clinician (80%) and client outcomes (77%). Even more importantly, these same reviews' results indicate that the most methodologically rigorous studies of supervision's efficacy (e.g., experiments with randomized supervision conditions versus non-supervision controls) have more consistently supported supervision's significant, positive, and substantial effect on clinician and client outcomes (e.g., Bambling et al., 2006; Mannix et al., 2006; Rakovshik et al., 2016; Smith et al., 2012).

Focusing first on clinician practices, RCTs repeatedly find that supervision significantly improves clinician fidelity—particularly in the context of CBT implementation (e.g., Mannix et al., 2006; Rakovshik et al., 2016; Sholomskas et al., 2005). For instance, Mannix and colleagues (2006) trained 20 palliative care practitioners in CBT, providing didactic CBT training and 6 months of CBT-focused supervision before randomly assigning clinicians to either another 6 months of supervision or a discontinued supervision control. Clinicians' fidelity to CBT was assessed at pre-training and at 6- and 12-month follow-up assessments (i.e., before and after random assignment to supervision or control groups) using both blind expert review of audio-recorded sessions and clinicians' self-reported competence using standardized measures. Overall, clinician fidelity significantly improved after CBT training and the initial 6 months of supervision ($d = 1.18$)—but thereafter, fidelity significantly *increased* only for clinicians in the continued supervision group while fidelity significantly *decreased* for clinicians in the discontinued supervision condition, such that expert-rated competence was significantly higher

in the supervision condition at the 12-month timepoint, to a large degree ($d = 2.17$). Moreover, self-rated competence with CBT was significantly higher for the continued versus discontinued supervision groups with multiple CBT-specific skills (i.e., modifying automatic thoughts and core beliefs, case formulation, and use of the cognitive model of depression).

Likewise, Sholomskas and colleagues (2005) randomly assigned 78 community-based substance abuse counselors to one of three CBT training methods (i.e., manual review only, manual review plus a CBT web-based training, and manual review and CBT training plus supervised casework). CBT fidelity was measured at three timepoints (i.e., baseline, 4 weeks after baseline, and a 3-month follow-up) using three standardized roleplays that were rated blindly using a standardized expert-rating scale for CBT adherence and competence (e.g., Yale Adherence Competence Scale; Carroll et al., 2000). Additionally, a 55-item, multiple-choice test on information from a CBT manual (Carroll, 1998) was administered at baseline and post-training (i.e., 3-month follow-up). From the first to second time-points, therapists receiving supervision had the highest expert-rated adherence and competence, and these differences were significant and moderate when compared to the manual only control across roleplays ($d_M = 0.67$ and 0.69 , respectively). These supervision-related contrasts increased further to a large degree from post-training to follow-up, both for adherence ($d_M = 1.20$) and competence ($d_M = 1.20$). Moreover, those assigned to the supervision condition had the highest increase in CBT knowledge, with the difference in objective knowledge gains being small-to-moderate between the supervision and manual only conditions ($d = 0.44$). Furthermore, clinicians' self-rated adherence to, satisfaction with, and barriers to CBT were consistently the best for the supervision condition at a 3-month follow-up.

More recently, Rakovshik and colleagues (2016) conducted a CBT- and supervision-focused RCT in a clinical setting, involving 61 therapist participants. Participants were randomly assigned to one of three CBT-training conditions (i.e., internet-based CBT didactics with video conference-delivered supervision, the same didactics without supervision, and a waitlist control

with neither didactics nor supervision). Like the former study, CBT fidelity was assessed via expert ratings of recorded sessions at three timepoints (i.e., pre-, mid-, and post-training). At the final timepoint (i.e., after 3 months of training or waitlist), therapists in the supervision condition had significantly higher CBT fidelity than those in the instruction only condition ($d = 0.72$) and the waitlist condition ($d = 1.29$). Similarly positive and rigorous findings were found by experimental comparisons of supervision and non-supervision training in a specific, non-CBT EBT (i.e., Motivational Interviewing; MI), with supervised MI therapists consistently outperforming non-supervised therapists in terms of MI-specific competence with clients (Miller et al., 2004) and MI-specific adherence with analogue sessions (Smith et al., 2012).

As would be expected given the above findings, experimental studies of supervision also consistently demonstrate that supervision benefits clients. For example, in the aforementioned RCT conducted by Miller and colleagues (2004) with 140 community substance use counselors, only the clients of therapists who received supervision feedback and coaching showed significantly better pre- to post-treatment functioning, per client-report. Another experiment by Bambling et al. (2006) randomly assigned 127 community therapists and their in-house supervisors ($n = 40$) to either supervision or no supervision conditions while therapists provided eight sessions of problem-solving treatment to 127 randomly assigned clients with major depressive disorder. Clients receiving treatment from supervised therapists, versus unsupervised therapists, reported significantly better clinical outcomes to a moderate-to-large degree, including stronger working alliances ($d = 1.51$), greater pre- to post-treatment reductions in depressive symptoms ($d = 0.53$), satisfaction with therapy ($d = 0.76$), and lower dropout rates ($d = 0.96$). Collectively, these experimental findings—and those from quasi-experimental and non-experimental supervision-outcome studies (e.g., Bradshaw et al., 2007; Callahan et al., 2009; Frankel & Piercy, 1990; Schoenwald et al., 2009; cf., Rousmaniere et al., 2016)—present substantive evidence for the efficacy of supervision. However, research also has

begun to examine if and how supervision's efficacy may vary based on the quantity and/or quality of supervision.

Quantity. Although supervision is partially defined by its recurrent nature (Alfonsson et al., 2017; APA, 2014; ASPPB, 2015, 2019; Bernard & Goodyear, 2014; Dorsey et al., 2018; Kavanagh et al., 2008; Milne, 2007; Lucid et al., 2018; Pullman et al., 2018) and nominally requires “an adequate amount of professional time” (Falender & Shafranske, 2014), neither optimal nor minimally sufficient frequencies and duration of supervision have yet to be established empirically. For those few studies that have examined supervision quantity in community settings, veridical rates and amounts (and the methods used to measure them) have ranged widely (Choy-Brown & Stanhope, 2018; Dorsey et al., 2013, 2017, 2018; Gabbay et al., 1999; Kolko et al., 2009; Liness et al., 2019; Schoenwald et al., 2008). For example, early research on supervision frequency indicated that a significant percentage (i.e., 28%) of the 127 surveyed British psychotherapists, counselors, and psychologists reported receiving *no* supervision at all, despite professional guidelines and local legal requirements mandating regular supervision for therapists (Gabbay et al., 1999). Approximately a decade later in the US, Schoenwald et al. (2008) conducted a large national structured interview survey of directors of child mental health organizations ($n = 200$), and nearly all (i.e., 90%) of the surveyed organizations reported providing weekly clinical supervision. A year later, Kolko et al. (2009) surveyed US practitioners seeking training in TF-CBT and found notable inconsistency in reported weekly supervision in community-based child mental health agencies. More recently, Dorsey and colleagues (2017) examined workplace-based clinical supervision in community agencies participating in a US state-funded TF-CBT initiative, and found that most but not all clinicians (i.e., 75%) reported receiving weekly supervision. Yet, when Dorsey et al. (2018) had TF-CBT supervisors prospectively report on 697 supervision sessions, results indicated that weekly supervision occur inconsistently. Moreover, less than half (i.e., 49%) of 45 UK community-based CBT clinicians received weekly supervision when surveyed 1 year after a

CBT training, though most (i.e., 89%) received clinical supervision at least fortnightly (Liness et al., 2019). Thus, of the relatively little research that has examined supervision frequency in community settings, results typically indicate that most—*but not all*—clinicians receive supervision, and when delivered, supervision often—*but far from universally*—occurs weekly. Still, frequency is only one facet of supervision quantity.

In regard to supervision duration, Gabbay and colleagues (1999) found that the majority of their surveyed clinicians (62%) received *less* than 1 hour of supervision per week. In contrast, Dorsey et al. (2017) reported that 75% of their surveyed TF-CBT therapists received approximately 1 hour of supervision per week. Choy-Brown and Stanhope (2018) also used retrospective self-report of supervision duration with a sample of 273 community-based clinicians. The average reported amount of clinical supervision per week was 2.2 hours ($SD = 1.9$, $Mdn = 1.6$, $Mo = 0.5$). Similarly, Liness and colleagues' (2019) also used retrospective self-report of supervision duration and found a median supervision duration of 1.5 hours. However, when Dorsey et al. (2018) examined *prospective* recordings of 638 supervision sessions of TF-CBT community trainees, supervision only lasted 26 minutes on average ($SD = 15.0$, range: 1–72). Yet, regardless of supervision measurement, no study has empirically linked supervision quantity (frequency or duration) to clinician or client outcomes. Instead, Liness and colleagues' (2019) study indicated that neither duration nor frequency significantly predicted clinician or client outcomes. In contrast, far more ample and rigorous research suggests that the *quality* of supervision—i.e., formats, activities, and content—does significantly affect both clinician and client outcomes.

Quality. Consistent with aforementioned conceptions of supervision, supervision quality pertains to the formats and techniques in which the supervisor and supervisee engage, as well as the content that it covered with those formats and techniques. Increasingly, research has tested empirically the degree to which some supervision formats, techniques, and content are more effective than others (e.g., Bartle-Haring et al., 2009; Bearman et al., 2013, 2017;

Bradshaw et al., 2007; Carmel et al., 2016; Grossl et al., 2014; Henggeler et al., 2002; Kivlighan et al., 1991; Klitzke & Lombardo, 1991; Milne et al., 2011; Reese et al., 2009; Schoenwald et al., 2009; Sheidow et al., 2008; Smith et al., 2012; Tanner et al., 2012; Thurber, 2005; Weck et al., 2016). As previously noted, this literature has collectively identified a new “gold standard” for evidence-based supervision quality that augments and/or replaces the more traditional practices that comprise supervision as usual (SAU; Bearman et al., 2017; Bradshaw et al., 2007; Dorsey et al., 2018).

Format. As far as format is concerned, promising though not always consistent evidence suggests that live supervision can outperform SAU, or more precisely, the traditional format wherein supervision occurs exclusively between, versus during, client sessions (Bartle-Haring et al., 2009; Carmel et al., 2016; Kivlighan et al., 1991; Thurber, 2005; Weck et al., 2016; cf., Smith et al., 2012; Tanner et al., 2012). Apart from non-experimental research that supports live supervision’s acceptability, feasibility, and efficacy in improving treatment progress (e.g., Bartle-Haring et al., 2009; Rousmaniere & Frederickson, 2013; Klitzke & Lombardo, 1991; Thurber, 2005), several controlled studies further substantiate live supervision’s greater efficacy over SAU. Notably, these studies include those with randomization (e.g., Carmel et al., 2016; Weck et al., 2016; cf., Smith et al., 2012) and without it (e.g., Kivlighan et al., 1991; cf., Tanner et al., 2012).

For instance, Carmel and colleagues (2016) randomly assigned eight therapists being trained in a specific EBT (i.e., Dialectical Behavior Therapy) to either bug-in-the-eye (BITE) live supervision or SAU, with results indicating that BITE-supervised therapists had better case formulation as well as DBT theoretical and protocol knowledge, skills, and client outcomes—though these differences were not statistically significant, likely due to the small sample size and related power. Comparatively, Weck and colleagues (2016) randomized 23 therapists to receive either BITE ($n = 11$) or delayed video-based supervision ($n = 12$), and found statistically significant, moderate benefits of BITE compared to SAU in regard to CBT competence ($ds =$

0.39–0.66) and working alliance ($d_s = 0.66–0.78$). However, once again, there was no significant difference detected for client outcomes, though this analysis was also underpowered (i.e., only able to detect large effects). Similar to BITE, live bug-in-the-ear and knock-on-the-door supervision formats have preliminary, if somewhat mixed, empirical support in regards to improving protocol-specific adherence ($d_s = -0.36$ and 0.54 ; Smith et al., 2016) and enhancing clinician- and client-rated therapeutic alliance during interpersonal-dynamic psychotherapy (Kivlighan et al., 1991). Overall, the above findings suggest live-supervision formats may have potential advantages, though more experimental research with larger samples (and perhaps more diverse EBT contexts) is needed before rigorous conclusions can be rendered. Regardless, any potential advantage of different supervision formats are meaningless if supervisors are not engaging in effective supervisory techniques.

Techniques. Far more consistently than the above research on supervision format, empirical literature evinces the use of “gold-standard” techniques instead of, or in addition to, SAU techniques. As previously mentioned, several supervisory techniques fall under this gold standard umbrella. These include techniques related to measurement-based care (e.g., symptom monitoring and review of client symptoms, standardized fidelity/adherence assessment), direct review of client sessions (either via in-vivo session observation or audio/video recordings), and observational-experiential learning with accompanied feedback (e.g., behavior rehearsal of practice elements by supervisees with supervisor modeling, coaching, and/or feedback; Alfonsson et al., 2018; Bearman et al., 2013, 2017; Beidas et al., 2014; Dorsey et al., 2018; Edmunds et al., 2013; Ford & Weissbein, 1997; Gross et al., 2014; Reese et al., 2009; Rosenbaum & Ronen, 1998; Sheidow et al., 2008; Schoenwald et al., 2009; c.f., Milne et al., 2011).

Consistent with more general literature on measurement-based care (MBC; see Connors et al., 2020; Fortney et al., 2017; Lewis et al., 2019), a growing number of individual and meta-analytic studies support the inclusion of continuous, standardized client progress monitoring and

related feedback practices to improve psychotherapy outcomes (e.g., larger or faster symptom reduction, higher therapeutic alliance, better client retention and engagement; Anker et al., 2009; Duncan et al., 2006; Hawkins et al., 2004; Knaup et al., 2009; Lambert & Shimokawa, 2011; Lambert et al. 2001, 2002, 2003; Saptá et al., 2005; Whipple et al., 2003). Furthermore, multiple controlled studies indicate that supervision that incorporates these MBC techniques typically outperforms SAU (e.g., Anker et al., 2009; Grossl et al., 2014; Reese et al., 2009). More specifically, therapists randomly assigned to supervision with versus without MBC feedback, on average, reported higher supervisory alliances ($ds = 0.35\text{--}0.59$; Grossl et al., 2014; Reese et al., 2009) and satisfaction with supervision ($d = 0.70$; Grossl et al., 2014). Additionally, clients of these MBC-supervised clinicians typically had significantly better outcomes than SAU control clients, to a moderate degree ($ds = 0.50\text{--}0.55$; Anker et al., 2009; Reese et al., 2009; c.f., Grossl et al., 2014). Notably, the above studies focused on MBC feedback related to client functioning, though MBC-incorporated supervision can also include feedback related to routine, standardized assessment of clinician fidelity (Allen et al., 2018; Connors et al., 2020; Henggeler et al., 2002; Dorsey et al., 2018; Schoenwald et al., 2009).

Equally if not more robustly, empirical research also indicates that experiential learning techniques in supervision (i.e., modeling, roleplay, and behavioral rehearsal with feedback) are superior to didactic or discussion-based supervision techniques (Bearman et al., 2013, 2017; Beidas et al., 2014; Bradshaw et al., 2007; Dorsey et al., 2018; Edmunds et al., 2013; Roth et al., 2010; Schoenwald et al., 2009). For example, Bradshaw et al.'s (2007) quasi-experimental study compared SAU to supervision that incorporated gold standard techniques, particularly experiential learning, and found that the latter significantly (a) improved clinician's treatment knowledge and (b) better reduced clients' positive psychotic and overall symptoms. Additionally, Bearman and colleagues (2013) prospectively studied supervision techniques with 57 EBT-trained community therapists, their 12 workplace supervisors, and their 136 youth clients receiving EBTs. Results indicated that supervisors' use of modeling and roleplay techniques in

supervision improved clinicians' EBT-specific adherence with their clients, to a moderate, significant degree ($r_s = .32$ and $.30$; $p_s = .008$ and $.014$, respectively); whereas, greater use of discussion-based techniques in supervision correlated with *lower* EBT-specific adherence to a small, albeit non-significant, degree ($r = -.22$, $p = .46$). Still, neither of these studies was a RCT.

In contrast, Bearman and colleagues (2017) randomly assigned 40 participating graduate clinicians to one of two supervision conditions: (1) supervision as usual (SAU) techniques (i.e., rapport building, agenda-setting, case narrative and conceptualization, planning for subsequent sessions, discussing alliance, and case management/administrative issues) or (2) enhanced supervision (SUP+) techniques (i.e., review of recordings, modeling, and role-play accompanied with feedback). All participants attended a 3-hour workshop on cognitive restructuring for youth with depression followed by three supervision meetings. Both groups had large pre- to post-training gains in cognitive restructuring, CBT, and general fidelity ($d_s = 0.84$ – 1.00), as rated by blind coders during standardized behavioral observations of analogue therapy sessions. Yet, once post-training supervision began, clinicians receiving SUP+ versus SAU had additional significant, moderate improvements in cognitive restructuring adherence ($d = 0.63$), cognitive restructuring competence ($d = 0.70$), and model-general CBT competence ($d = 0.64$). However, general adherence to common factors (i.e., affirmations and validating statements) did not significantly change for either supervision condition.

In all, these results suggest that supervision that involves more MBC and active learning techniques may be more beneficial than SAU techniques, at least for EBT-specific adherence. Notwithstanding this evidence, experiential and other gold standard supervision techniques occur rarely in community settings, particularly relative to efficacy trials where they are more common (Dorsey et al., 2018; Roth et al. 2010). Nevertheless, even if these evidence-based supervision techniques are employed, they must be focused on the right content.

Content. As previously noted, supervisory content pertains to the clinical skills and/or practice elements targeted by techniques implemented during supervision (Dorsey et al., 2018;

Edmunds et al., 2013; Pullman et al., 2018). As with other supervision-focused research topics, few studies have empirically examined typical, much less optimal, supervisory content—including the extent to which supervision provided by community agencies includes EBT-specific content (Accurso et al., 2011; Carroll & Rounsaville, 2007; Dorsey et al., 2013; Hoge et al., 2011; Lucid et al., 2018; Pullman et al., 2018). That said, extant literature consistently indicates that EBT-specific content in community treatment contexts (e.g., substance abuse, behavior problems, trauma, depression) is relatively rare and brief (i.e., low intensity), particularly in comparison to administrative content (e.g., billing, filing paperwork), more general clinical content (e.g., crisis management, case conceptualization), or even non-work content (Accurso et al., 2011; Bearman et al., 2017; Carroll & Rounsaville, 2007; Dorsey et al., 2017, 2018; Pullman et al., 2018). This relative dearth in EBT-specific content is concerning, especially since growing evidence suggests that EBT-focused supervision significantly improves EBT delivery and client outcomes, chiefly by enhancing clinicians' protocol-specific fidelity (Bearman et al., 2013, 2017; Henggeler et al., 2002; Kitchiner et al., 2006; Liness et al., 2019; Schoenwald et al., 2009; Sheidow et al., 2008).

For example, Bearman et al.'s (2017) aforementioned experimental study randomly assigned CBT-trained clinicians to receive either (a) SAU or (b) enhanced supervision (SUP+) that consisted of gold standard supervision techniques (e.g., modeling, roleplay, and corrective feedback) focused on a CBT-specific practice element (i.e., cognitive restructuring). As previously noted, condition-blind, objective ratings of analogue client interactions indicated that clinicians who received SUP+, versus SAU, had higher cognitive restructuring fidelity ($d = 0.63$), cognitive restructuring competence ($d = 0.70$), and model-general CBT competence ($d = 0.64$), all to a moderate, significant degree. As discussed above, one potential explanation for the superior clinician outcomes of SUP+ over SAU was the condition's differentiating *techniques* (i.e., SUP+ had more experiential learning techniques; whereas, SAU had more typical discussion techniques). Yet, another potential mechanism was how *content* differed between

SAU and SUP+ to a large, significant degree. Namely, SUP+, compared to SAU, had not only significantly more experiential learning techniques, but those techniques (i.e., modeling, roleplay, and corrective feedback) were focused primarily on CBT-specific content (particularly cognitive restructuring; d s = 5.10, 2.78, and 7.55, respectively). At the same time, the SAU condition spent significantly more time focused on administrative content (d = 1.66) and general versus CBT-specific clinical content, such as supervisory alliance (d = 0.84), therapeutic alliance (d = 1.21), case narrative and conceptualization (d = 1.56), and case management (d = 0.88). Unfortunately, Bearman et al.'s (2017) study did not separately assess the unique effects of techniques and content (or potential interactions), though optimal supervision quality likely requires evidence-based techniques focused on evidence-based content. Moreover, their use of standardized client analogue interactions did not permit any conclusions about how SUP+ versus SAU affects client outcomes, particularly in the context of a highly differentiated EBT (versus the more general CBT model or a single CBT practice element).

Fortunately, other research has overcome the latter two limitations. Namely, Schoenwald and colleagues (2009) conducted a non-experimental, prospective, longitudinal study, using mixed effects regression models to determine the relations between supervisor adherence to EBT-specific supervision protocol (Henggeler et al., 1998), clinician adherence to the related EBT (i.e., Multisystemic Therapy; MST), and outcomes for clients receiving said EBT. Participants included 1,979 youth clients with clinical conduct problems and their families, as well as 429 therapists from 45 community agencies. Findings revealed that supervisors' average use of MST-specific supervision content (measured by standardized supervisee-report) significantly predicted clinicians' MST-specific adherence (measured by standardized caregiver-report). In turn, therapist adherence to MST significantly predicted greater decreases in clients' caregiver-reported externalizing and internalizing problems, with the speed of externalizing reductions being significantly faster for cases with high versus low EBT-specific adherence. Follow-up mixed-level analyses further showed that greater EBT-focused supervision content

and techniques predicted significantly greater and faster improvements in client externalizing, internalizing, and functioning problems. In contrast, supervision focused on general clinical content, versus EBT-specific content, predicted significantly weaker decreases in client functioning problems. Collectively, results from this study suggest that EBT-specific supervision techniques and content, compared to general supervision practices, consistently produce better clinician and client outcomes—at least for MST. Whether these findings generalize to other EBTs, such as TF-CBT, remains unknown.

TF-CBT-Specific Supervision. Compared to the aforementioned literature on supervision quantity and quality, research on supervision in the specific context of TF-CBT implementation is more limited, and largely descriptive (e.g., Dorsey et al., 2018; Kitchiner et al., 2006, Lucid et al., 2018; Pullman et al., 2018). Of these studies, Kitchiner and colleagues' (2006) prospective study attempted to increase TF-CBT availability by training mental health professionals in TF-CBT with Liese and Beck's (1997) group clinical supervision (GCS), a structured supervision model that involved a focus on EBT-specific content using a combination of didactic and experiential supervision techniques (e.g., direct instruction of TF-CBT components, case discussions, role-play, and review of audio-recordings of client sessions). Results from the study indicated that the TF-CBT supervisees' clients ($n = 16$) significantly improved pre- to post-treatment on PTS, depressive symptoms, and overall functioning at work and during private leisure, with all TF-CBT completers ($n = 11$) achieving complete PTSD remission by post-treatment. These findings suggest a GCS supervision model (or at least its EBT-focused content and/or experiential techniques) may help clinicians, particularly those new to TF-CBT, to successfully implement TF-CBT. That said, this study had several limitations, including a small sample size; no standardized measurement of implemented supervision content, intensity, and/or techniques; no control group or pre- to post-training assessment; no explicit measurement of clinician fidelity (specific or general); and no reported effect sizes. Fortunately, more contemporary research has addressed some of these limitations.

For example, Lucid and colleagues (2018) conducted a cross-sectional study intended to examine clinician-, supervisor-, and organization-level factors related to the intensity of TF-CBT-focused content and techniques in community workplace-based supervision. Participants included 56 supervisors and 207 clinicians from 25 community mental health agencies ($n = 37$ clinics). A baseline supervision survey used standardized measures to assess clinician-reported intensity of TF-CBT-specific supervision (EBT Supervision Practice Assessment; Lucid et al., 2018), supervisors' perceived self-efficacy with TF-CBT-specific supervision (Self-Efficacy in Supervision Index; Deblinger, Child Abuse Research Education and Service Institute, & Rowan University, 2013), supervisors' objective TF-CBT knowledge (adapted from Denver Post Health Survey; Fitzgerald, 2010), supervisors' general EBT-related attitudes (Modified Practice Attitudes Scale; Park et al., 2016), and clinician-reported EBT organizational climate at their agency (Evidence-Based Organizational Checklist; Ehrhart et al., 2014). Survey results indicated that clinician-perceived organizational climate correlated significantly, positively, and to a moderate degree with supervisors' objective TF-CBT knowledge ($r = .31$) and supervisors' self-reported attitudes towards EBTs ($r = .31$). However, in contrast to supervisor experience, knowledge, and attitudes, only clinician-perceived EBT organizational climate significantly predicted TF-CBT supervision intensity ($b = .73$). In regards to supervision intensity, TF-CBT clinicians typically reported that their supervisors, on average, included a relatively low intensity of TF-CBT-specific supervision (i.e., between "rarely" and "sometimes" on a 5-point scale; 1 = "never", 5 = "almost always"). Even the most frequently reported supervision techniques and targeted content (i.e., providing constructive feedback, discussing engagement techniques, and helping clinicians overcome client avoidance of exposure) occurred, on average, only between "sometimes" and "often." Contrastingly, reported supervisor engagement in TF-CBT-focused experiential learning techniques (i.e., role-play) typically "never" to "rarely" happened. Clinicians also reported that supervisors seldom (i.e., between "rarely" and "sometimes") reviewed clients' progress through TF-CBT components or encouraged completion of treatment in 16–20

sessions, suggesting there was little supervisory support for TF-CBT fidelity, specifically adherence to protocol.

As a follow-up study, Dorsey and colleagues (2018) examined a subsample of Lucid et al.'s (2018) participants (i.e., 28 supervisors and 70 clinicians). Supervisors not only completed the above baseline survey, but also submitted over 43 weeks (1) audio-recordings of their supervision sessions ($n = 438$) and (2) weekly surveys on whether supervision occurred and whether a TF-CBT case was discussed. The Supervision Process Observational Coding System (SPOCS), a study-specific adaptation of the Therapeutic Process Observational Coding System for Child Psychotherapy Strategies scale (TPOCS-S; McLeod, 2001, 2010), was used to code what general and TF-CBT specific supervision strategies ($n = 29$), techniques ($n = 13$), and content ($n = 16$) occurred during recorded supervision of TF-CBT cases.

Overall, results indicated significant room for improvement in TF-CBT supervision in community settings. Namely, data indicated that SAU techniques were ubiquitous, particularly supportive listening (99%), information gathering (97%), didactic instruction (93%), and providing clinical suggestions (86%). In contrast, gold standard techniques were rarer, with few supervision sessions including any behavioral rehearsal (16%) or review of actual practice (5%), although most sessions did include some form of fidelity assessment (64%). Intensity varied notably across techniques, with some techniques' variance being more attributable to clinicians (e.g., didactic instruction: 30%, behavioral rehearsal: 25%, modeling: 23%) versus supervisors (e.g., elicitation: 27%, symptom monitoring: 23%, fidelity assessment: 12%).

In terms of supervision content, case management was the most commonly occurring topic (96%), and when it was covered, it was typically done so to a moderate (50%) or high intensity (27%). Other prevalent content areas were treatment engagement (92%), exposure (81%), trauma history (78%), coping skills (76%), creative application of TF-CBT elements (64%), parent-level challenges that impact TF-CBT (62%), psychoeducation (60%), and assessment (54%). Content areas covered infrequently included trauma-related safety (25%),

preparation for conjoint sessions (23%), client behavioral rehearsal (22%), and clinician modeling (6%). Furthermore, content areas with variance largely attributable to clinicians included assigning/reviewing client homework (21%), creative application of TF-CBT elements (20%), cognitive processing (17%), parent-level challenges (16%), trauma history (16%), and coping skills (16%). Comparatively, content areas with variance largely attributable to supervisors included case management (34%) and assessment (23%). Overall, the low intensity of many TF-CBT-specific content areas and gold standard techniques suggests room for improvement in community TF-CBT supervisory practices. Moreover, the fact that significant variance in several TF-CBT supervision content areas and techniques was attributable to clinicians may suggest that some clinicians are interested in covering this information and/or receiving these evidence-based techniques over SAU practices, even as many supervisors are not meeting this demand.

These findings were expanded by another study conducted by the same research team with the same community participants (28 supervisors, 70 clinicians). Namely, Pullmann and colleagues (2018) examined the degree to which supervision of TF-CBT cases focused on TF-CBT exposure, assessment, and/or non-EBT content (e.g., crisis/case management, administrative work, and non-work topics), and the extent to which TF-CBT supervision intensity related to agency-, supervisor-, clinician-, and session-level factors. As in Lucid and colleagues' (2018) study, the Evidence Based Organizational Checklist (Ehrhart et al., 2014) was used to assess clinician-perceived organizational climate, and the Modified Practice Attitudes Scale (Park et al., 2016) was used to measure supervisors' general attitudes towards EBTs. Additionally, clinicians' TF-CBT self-efficacy was assessed using a study-adapted 11-item version of the TF-CBT Clinical Skills Questionnaire (TCSQ; National Crime Victims Research and Treatment Center, 2010). TF-CBT fidelity (i.e., combined adherence and competence) was further assessed via clinician- and supervisor-report with the Skill in Implementing Components: Trauma and PTSD scale, an 11-item measure with a 6-point scale (i.e., 0 = "do not use", 5 =

“advanced”). Lastly, just as in Dorsey and colleagues’ (2018) study, supervision content and intensity in 438 supervision sessions were observed and coded using the Supervision Process Observational Coding System.

Results from this study revealed that 82% of recorded supervision sessions mentioned exposure; however, the intensity with which it was addressed ranged (i.e., 24% of sessions had low intensity, 41% had moderate intensity, and 17% had high intensity). This variance in exposure intensity was attributable to factors at the supervisor (16%), clinician (19%), and individual supervision session level (65%). In terms of assessment, this content occurred in 55% of supervision sessions, typically with low (32%) versus moderate (18%) or high intensity (5%). Variance in assessment content intensity was more attributable to supervisors (23%) than clinicians (2%), though most variance was once again attributable to session-level factors (75%). Although it is encouraging that these TF-CBT-specific content areas were covered frequently (though often at low-to-moderate intensity), non-TF-CBT supervision content—particularly case backgrounds, administrative work, case management, non-TF-CBT/general practice elements, non-work issues, and crisis management—occurred more frequently (i.e., 96% of sessions) and intensely (i.e., 19% low, 50% moderate, 27% high). As with assessment, variance in non-TF-CBT intensity was attributable more at the supervisor (35%) rather than the clinician level (8%), though most variance was again at the session level (58%).

Findings also highlighted specific agency, supervisor, clinician, and session factors that predict TF-CBT supervision intensity. First, more intense TF-CBT exposure content in supervision was linked to more time and time per case during supervision sessions, as well as better organizational climate. Second, greater assessment intensity was predicted by greater supervisor use of EBTs, positive organizational climate, and supervisor CBT orientation (as opposed to family systems orientation which predicted less intense assessment content). Third, greater coverage of non-TF-CBT supervision content was significantly predicted by more

session time and time per case, lower supervisor knowledge of TF-CBT, and lower training in TF-CBT.

Collectively, these findings highlight not only normative levels of TF-CBT supervision techniques, content, and intensity in community settings, but also several targets for improving supervision quality via implementation initiatives that provide TF-CBT training to improve TF-CBT-specific knowledge and use, increase supervision quantity as well as quality techniques and content, and enhance organizational climate. However, no known study has directly examined how TF-CBT-related supervision quantity or quality changes, pre- to post-training, nor the degree to which said supervision practices affect adherence, general or specific, during TF-CBT implementation. Relatedly, no study has yet examined the degree to which LCs, CBLC or otherwise, improve TF-CBT-specific, in-house supervision quantity or quality. To bridge these practice-relevant gaps in the research literature, the present study was the first to both examine (1) supervision within the context of a CBLC and (2) the relation between TF-CBT-specific and general supervision and adherence.

Present Study and Aims

Childhood trauma and its sequelae remain prevalent, persistent, and costly (Bartlett & Smith, 2019; de Bellis & Zisk, 2014; Dye, 2018; Finkelhor et al., 2013; Kilpatrick et al., 2003; Lippard & Nemeroff, 2020; McLaughlin et al., 2012, 2013; Saunders & Adams, 2014; Skar et al., 2020). Consequently, there remains a strong need for improved dissemination and implementation of empirically supported trauma interventions, such as TF-CBT, a best practice treatment for youth ages 3–18 with diverse trauma exposure, post-traumatic stress, and related comorbidities (Allen & Johnson, 2012; American Academy of Child and Adolescent Psychiatry, 2010; Cohen et al., 2017; de Arellano et al., 2014; Lenz & Hollenbaugh, 2015; Lucid et al., 2018). Previous studies have evinced that didactic training alone insufficiently sustains community integration of EBPs (Bearman et al., 2017; Beidas et al., 2012; Beidas & Kendall, 2010; Dorsey et al., 2018; Dimeff et al., 2009; Fixsen et al., 2005; Frank et al., 2019; Herschell

et al., 2010; Kavanagh et al., 2008; McHugh & Barlow, 2010; Schoenwald et al., 2004). Thus, most implementation models, such as the LC and related CBLC, include additional components (e.g., training cases with external consultation and quality improvement metrics) to promote EBT delivery with fidelity (Hanson et al., 2019; Nadeem et al., 2013). Prior LCs and CBLCs have had promising results pertaining to TF-CBT-adherent adoption and sustainment (Ebert et al., 2012; Hanson et al., 2019; Helseth et al., 2020; Lang et al., 2015, 2017). Still, the role in-house supervision plays in EBT adherence—particularly for TF-CBT and specifically during a CBLC—remains unknown. Notwithstanding, prior evidence suggests that gold standard supervision techniques (e.g., supervisory fidelity monitoring, observation of client sessions, modeling, behavioral rehearsal with feedback) may be key to increasing and sustaining treatment adherence, especially adherence to specific EBPs (Aarons, 2009; Carpenter et al., 2012; Swain et al., 2010; Lu et al., 2014), though these effects may differ between EBP-specific versus general supervision content (Bearman et al., 2013, 2017; McLeod et al., 2019; Milne et al., 2011; Schoenwald et al., 2009). Relatedly, supervision frequency and duration may also affect adherence, as intense coverage of EBT-specific content with evidence-based supervision techniques likely requires a regular dosage of supervision quantity (Pullman et al., 2018; Roth et al., 2010). Thus, the current study had two primary goals: (1) to examine how the quantity and quality of supervision may change during CBLCs (and by extension, LCs) and (2) to examine relations between general and TF-CBT-specific supervision practices and therapist adherence to general and trauma-specific EBPs. More specifically, the current study tested the following hypotheses:

1. Therapist supervision practices would improve significantly, pre- to post-CBLC, such that:
 - a. Supervision *quantity* (i.e., duration and frequency) would increase significantly, pre- to post-CBLC, and

- b. Supervisory *quality* (i.e., techniques and content) would improve significantly, pre- to post-CBLC, in that reported use of evidence-based supervisory techniques—particularly those specific to TF-CBT content—would increase significantly, pre- to post-CBLC.
- 2. Treatment adherence would improve significantly, pre- to post-CBLC, such that:
 - a. General adherence practices would increase significantly, pre- to post-CBLC, and
 - b. TF-CBT-specific adherence would increase significantly, pre- to post-CBLC.
- 3. The hypothesized pre- to post-CBLC improvements in supervision *quality*, particularly in TF-CBT-specific supervision practices, would significantly predict the above improvements in treatment adherence, and especially TF-CBT-specific adherence.

Chapter 2: Methods

Research Context

The current study utilized data collected from Project BEST's statewide Community-Based Learning Collaborative (CBLC) initiative (see Hanson et al., 2016, 2018, 2019; Saunders & Hanson, 2014). In short, Project BEST is a statewide, decade-long implementation initiative in South Carolina, funded by the Duke Endowment and the National Institute of Mental Health, which developed and utilized CBLCs to train community-based mental health professionals (i.e., clinicians, brokers, and senior leaders) in trauma-focused, evidence-based practices (EBPs) for youth and affected caregivers. Community-based mental health professionals from multiple service sectors (e.g., child welfare, advocacy, and mental health organizations) were involved in an effort to improve community access to said EBPs. Congruent with these goals, the primary aims for Project BEST's participating clinicians were sustainably improving their adherence to and competence with Trauma-Focused Cognitive Behavioral Therapy (TF-CBT). To meet those aims, the CBLC model was developed and implemented to provide the requisite dissemination, training, implementation support, and outcome evaluation. The present study used prospective, quantitative survey data collected during the six CBLCs of Project BEST's third phase (i.e., the largest and most recently completed phase focusing on TF-CBT, which lasted from 2014–2016; see Hanson et al. [2019] for more details on Project BEST's phases).

Participants

In total, 338 clinicians participated in one of six CBLCs comprising Project BEST's third phase (i.e., attending a CBLC's first Learning Session). Of those initially participating clinicians, 224 (66%) finished all of the CBLCs' training requirements. For clinicians, these requirements included a preliminary online web course (i.e., TF-CBT *Web*; <https://tfcbt2.musc.edu>), two 2-day Learning Sessions focused on TF-CBT, 12 or more consultation calls with national TF-CBT trainers, and two or more graduated TF-CBT cases (see Hanson et al., 2019). Change in

employment was the most common reason reported by clinicians for not completing CBLC training requirements (44%).

Clinician participants included both therapists and their direct supervisors that provided psychotherapy. The number of participating clinicians per CBLC ranged 50–68 ($M = 58.6$; $SD = 6.6$). These participants worked in 52 agencies, with 1–25 participating clinicians per agency ($M = 5.3$; $SD = 6.7$), though most agencies (69%) only had two or fewer clinicians participating in a CBLC. The majority of participating clinicians (80%) were employed by community clinics operated by South Carolina's Department of Mental Health. The remainder of participating clinicians were employed in Child Advocacy Centers (7%), private practices (2%), South Carolina's Department of Juvenile Justice (<1%), hospitals or pediatric offices (<1%), or "Other" agencies (11%). As Project BEST is primarily focused on improving implementation, collected data were predominantly focused on program evaluation and quality improvement. Thus, participant demographics (e.g., age, gender, and race) were not gathered. However, a follow-up study of CBLC clinicians from Project BEST (see Helseth et al. [2020]) did collect demographics. Results indicated that this convenience subsample of 35 clinicians were predominantly European-American (73%), non-Hispanic/Latina (97%) women (92%) with a master's degree and an average age of 38.6 years ($SD = 9.8$), and this subsample did not significantly differ from the full sample of CBLC clinicians in terms of CBLC engagement (Helseth et al., 2020).

Procedures

As part of each CBLC's Community Assessment, an online survey via Survey Monkey was administered to all CBLC participants, including therapists, at two time-points: (1) pre-CBLC (i.e., before the first Learning Session) and (2) post-CBLC (i.e., after consultation calls and all other CBLC activities ended). These surveys included a battery of questionnaires assessing individual, organizational, and community variables related to EBP, and especially TF-CBT, adoption and implementation (see Hanson et al., 2018, 2019). The current study analyzed

survey responses on three questionnaire sets that assessed supervision quantity and quality as well as general and TF-CBT-specific adherence (see below). On average, there was a gap of approximately 20 months ($SD = 4.6$) between pre- and post-CBLC surveys. The aforementioned survey measures, procedures, and sharing of data were approved by MUSC's Institutional Review Board, and related data were collected in accordance with APA's (2017) Ethical Guidelines for Research.

Measures

Supervision Quantity

To assess CBLC clinicians' *quantity* of formal and informal supervision, the current study used four CBLC survey items designed for Project BEST that targeted recent supervision frequency and duration. The first item (i.e., "In the past 3 months, have you received *any* clinical supervision [directly concerning the clinical assessment and treatment of your cases] from a supervisor in your organization?") provided a dichotomous response option (i.e., "Yes" or "No"). Clinicians who answered affirmatively to the above question were then asked to indicate, via free response, the typical duration of scheduled supervision (i.e., "Over the past 3 months, how *long* did scheduled supervision sessions usually last?"). For the current study, all answers were converted to minutes (i.e., 1.5 hours = 90 minutes) to facilitate analyses. The last two items assessed the recent frequency of formal and informal supervision as follows:

1. "Over the past 3 months, how frequently did you have *planned* in person, group, or individual supervision with your primary clinical supervisor?" and
2. "Over the past 3 months, how often did you receive *informal*, unscheduled consultation with your primary clinical supervisor?"

Both of these questions had a 5-point Likert response scale (0 = "Never", 4 = "Once a week or more").

TF-CBT Supervision Checklist–Therapist-Report (TSC-T)

To assess the *quality* (i.e., techniques and related content) of CBLC clinicians' supervision, the current study utilized the TSC-T. Created by the TF-CBT national trainers directing Project BEST, the TSC-T is a 29-item, therapist-report measure on the techniques and related content of personally received in-house supervision. Specifically, respondents were asked to "rate how frequently the following things occurred during supervision provided by your agency" using a 5-point Likert scale (1 = "Never" to 5 = "Most of the time"). The TSC-T has two rationally developed subscales. The first, *General Supervision Practices*, consists of 18 supervisory techniques whose content is not specific to TF-CBT, but otherwise considered good SAU practice. Example items from this subscale include:

- "Supervisor reviewed your specific treatment goals for clients",
- "Supervisor reviewed client homework,"
- "Supervisor was well organized, well prepared, and engaged in the supervision sessions," and

The TSC-T's second subscale, *TF-CBT-Specific Supervision*, has 11 items involving supervisory techniques whose content is specific to TF-CBT practice elements. Subscale item examples include:

- "Supervisor regularly reviewed your use of TF-CBT techniques with each of your cases",
- "Supervisor provided specific constructive feedback when you had difficulty doing TF-CBT techniques", and
- "Supervisor demonstrated knowledge and skill in teaching and supervising TF-CBT" (see Appendix B for all TSC-T items per subscale).

Notably, the TSC-T has four items that involve "gold standard" supervision techniques that are not part of general SAU techniques (i.e., live supervision/co-therapy, MBC, behavioral rehearsal of practice elements, observation of client session recordings). One of these items is

from the TSC-T's Specific subscale and thus entails using a "gold standard" supervision technique explicitly with TF-CBT-specific content (i.e., "Supervisor asked you to role-play or practice a TF-CBT technique in supervision"). In contrast, three of these items are from the General subscale and do not otherwise specify whether they pertain to general or protocol-specific content (i.e., "Supervisor did co-therapy with you as part of supervision", "Supervisor encouraged the regular use of standardized measures of symptoms and problems to assess client progress in therapy", "Supervisor listened to audiotapes or viewed videotapes of some of your therapy sessions"). To better isolate the influence of EBT-focused *content* in supervision versus the impact of content-agnostic *techniques*, these four items were excluded from final analyses (though exploratory analyses demonstrated that their inclusion/exclusion did not change the significance or relative magnitude of hypotheses-tested effects).

For each subscale, included items were summed, and then averaged by the number of included items in the subscale to facilitate cross-subscale comparisons. With the current sample, both subscales demonstrated excellent internal consistency, pre-CBLC (General: $\alpha = .93$; TF-CBT Specific: $\alpha = .95$) and post-CBLC (General: $\alpha = .94$; TF-CBT Specific: $\alpha = .92$).

TF-CBT Practices Scale (TPS)

To evaluate community therapists' general and specific treatment adherence to TF-CBT, pre- and post-CBLC, the TPS (Hanson et al., 2019) was utilized. Based on an earlier measure of TF-CBT adherence (i.e., Clinical Practices Questionnaire; Deblinger et al., 2005), the TPS is a 44-item, self-report measure of therapists' relative use of TF-CBT-adherent ($n = 40$) and non-adherent ($n = 4$) practice elements and related procedures during youth trauma treatment cases. Respondents are instructed to consider all of the child trauma-focused cases they have seen over the past 3 months before identifying the percentage of cases with which they utilized each practice. Response options use a 6-point Likert scale (0 = none, 1 = 1%–20%, 2 = 21%–40%, 3 = 41%–60%, 4 = 61%–80%, and 5 = 81%–100%). Reverse scoring is applied to the four items with TF-CBT-contraindicated (i.e., nonadherent) practices (e.g., allowing the youth or their

caregiver to direct most of the sessions, playing fun activities without any discussion of the traumatic event, stopping talk about traumatic events because a youth becomes distressed, encouraging youth to engage in destructive cathartic exercises to vent their negative feelings). Total TPS scores range 0–220, with higher total TPS scores indicating greater TF-CBT-adherence.

Beyond the total scale, seven subscales comprise the TPS. These rational subscales include the *General Therapy Practices* subscale, whose seven items assess therapists' self-reported adherence to evidence-based, but non-protocol specific practices (i.e., *general adherence*; e.g., “Established an agenda and structure for each therapy session”, “Explained the rationale and benefits of the intervention and described the treatment approach”, and “Regularly assigned homework or activities to complete for the next session”). Five other subscales assess therapists' adherence to TF-CBT-specific practices (i.e., *specific adherence*). First, *Trauma Psychoeducation* has two items on trauma-specific psychoeducation (i.e., “Provided specific information about the types of traumatic event(s) the child has experienced”, “Provided information about common reactions to traumatic events”). Second, *Behavior Management* includes five items assessing adherence to TF-CBT's parenting skills component (e.g., “Discussed with parents how to use a behavioral reward system”, “Taught parents to use praise effectively”) to traumatic events”). Third, *Coping* has eight items on adherence to TF-CBT relaxation, affect modulation, and cognitive coping components (e.g., “Helped the child identify and correct maladaptive thoughts”, “Taught the child to tighten and relax his/her muscles to feel less tense”). Fourth, *Exposure* has 14 items on explicit trauma exposure practices prescribed by TF-CBT's protocol (e.g., “Encouraged the child to describe thoughts, feelings, or sensations experienced during the trauma”; “Used imaginal or in-vivo exposure to help the child cope with trauma reminders”), Fifth, *Personal Safety* has items on adherence to TF-CBT's enhancing safety component (e.g., “Taught the child how to identify people, places, or situations that could be dangerous”; “Talked about ways the child can keep safe in the future”). Finally, the TPS also

includes a *Multidisciplinary Collaboration* subscale, whose four items focuses on therapists' collaboration with child welfare workers during cases that involved Child Protective Services (CPS; e.g., "When CPS was involved, you worked with the worker to overcome obstacles to the family coming to treatment consistently"; "For cases where CPS was involved, you had frequent communication with the worker about the family's progress in treatment"; see Appendix C for all TPS items). As this particular subscale is more pertinent to the CBLC's goal of multidisciplinary collaboration than treatment adherence (and has not been included in other TF-CBT-specific adherence studies that have used TPS items; e.g., Deblinger et al., 2020), this subscale was excluded from the study's analyses. As with the TSC-T, TPS subscale scores were computed by summing items per subscale, then averaging scores to facilitate standardized cross-subscale comparisons.

For the TPS, prior studies (i.e., Hanson et al., 2019; Helseth et al., 2020) have reported excellent internal consistency for the total TPS scale score across CBLCs and timepoints ($\alpha = .91-.97$). The same studies also reported good to excellent internal consistency for the TPS' subscales ($\alpha = .82-.96$). They also found evidence of the TPS' construct validity (i.e., high, but nonredundant standardized, inter-subscale correlations; $r_s = .57-.86$ [$M = .74$, $SD = .10$]) and intervention sensitivity (i.e., responsiveness). With this study's sample, the TPS' total scale once again had excellent internal consistency (pre-CBLC: $\alpha = .96$; post-CBLC: $\alpha = .95$). As for the subscales, the General subscale's internal consistency was good pre-CBLC ($\alpha = .83$) and adequate post-CBLC ($\alpha = .69$). To facilitate comparisons between general and protocol-specific adherence, the current study combined the TPS' five specific subscales into a singular, overall Specific subscale, which demonstrated excellent internal consistency across timepoints (pre-CBLC: $\alpha = .96$; post-CBLC: $\alpha = .95$).

Analytic Plan

Preliminary Analyses

Nesting. Potential nesting effects related to agency type (i.e., Department of Mental Health, Juvenile Justice, Child Advocacy Center, private practice) or specific CBLC on variables of interest were modeled as linear mixed-effects, and found to be non-significant (i.e., $ps = .20-.40$) as well as trivial in magnitude (i.e., ICCs $< .002-.08$; Hox, 2010). Consequently, both were excluded from further analyses. Modeling potential nesting effects at the agency-level was unviable due to the data's relative singularity (i.e., the mode and median of CBLC-participating clinicians per agency for Project BEST were both 2). Thus, all subsequent analyses were conducted at the participant-level (Hox, 2010). Additionally, given Project BEST's original nature as a statewide training initiative versus research study, the identities of participants' supervisors were not collected; thus, the relative overlap or independence of supervisors for the few clinicians nested in shared agencies cannot be ascertained or statistically modeled. On a final note, time between pre- and post-CBLC survey administration did not significantly relate to any of the Project BEST survey measures (see Helseth et al., 2020).

Missing data. In addition to a visual scan for missing data patterns across variables, cases, and items, Little's (1988) missing completely at random (MCAR) test was employed to assess missing data patterns at pre- and post-CBLC. Pre-CBLC, 62 items (92.5%) from the TPS and TSC-T, 71 cases (29.3%), and 312 values (1.9%) had missing data. Little's test indicated that these data were MCAR, $\chi^2(3,322) = 3,090.67$, $p = 1.00$. Post-CBLC, 52 items (77.6%), 29 cases (29.3%), and 150 values (2.26%) had missing data. As with pre-CBLC data, Little's test indicated that these data were MCAR, $\chi^2(1,727) = 1,630.63$, $p = .95$. Furthermore, independent samples *t*-tests were utilized to ensure completers and non-completers of the post-CBLC survey did not significantly differ from one another on any pre-CBLC variable measures (e.g., child trauma practices, interprofessional collaboration, TF-CBT skills and knowledge, organization and community support/barriers, and supervision). Results confirmed that clinicians

who only submitted pre-work, compared to those who also submitted post-work, did not significantly differ from on pre-CBLC variables of interest, including TPS and TSC-T scores ($ps = .12-.95$).

Based on missing data analyses—and consistent with other CBLC studies that found missing data to be similarly MCAR and less than 5% of all values (i.e., Hanson et al., 2018, 2019; Helseth et al., 2020; Peer et al., 2021), the current study implemented the expectation-maximization (EM) algorithm to replace missing values for partially completed surveys. Under such conditions, EM is an appropriate method as it generates values similar to other best-practice methods, such as multiple imputation and observed data (Graham, 2009; Lin, 2010; Twala, 2009). Lastly, every analysis was conducted with and without EM. Since significant values from each method were found to be equivalent to one another (i.e., p -values less than .05 with EM-imputed data remained below .05 regardless of imputation and vice versa), only EM-imputation results are reported.

Outliers. In order to identify outliers in supervision frequency and duration, TSC-T, and TPS responses, the interquartile range (IQR) multiplier approach (Tukey, 1977) was employed. This method is ideal given its robustness across distributions (Seo, 2006). A multiplier of 2.2 times the IQR was used to identify outliers since evidence suggests it more accurately identifies true outliers than traditional 1.5 IQR methods (Hoaglin et al., 1986; Hoaglin & Iglewicz, 1987).

This method identified six total outliers across all measures and timepoints. These sparse outliers were spread across three variables: supervision duration ($n = 3$), the pre- to post-CBLC difference score for the TSC-T General Practices subscale ($n = 1$), and the pre- to post-CBLC difference score for the TPS General Practices subscale ($n = 2$). Each of these six outliers were winsorized (i.e., values were truncated one unit away from the closest reported non-outlier value; Aiken & West, 1991; Cohen et al., 2003; Pedhauzer, 1997).

Power analyses. G*Power software (Faul et al., 2007) was utilized to estimate the sample size required for the primary analyses (see next section for details). Specifically, power

analyses were conducted with an associative power of .95. for (1) comparing pre- to post-CBLC supervision and (2) adherence and (3) predicting the latter with the former, based on planned MANOVAs and multiple multivariate regression. Effect size parameters were based on benchmark literature findings. Namely, given that past relevant studies have found large pre- to post-training improvements in supervision practices (e.g., $n_p^2 = .36$; Foxwell et al., 2017) and moderate-to-large gains in TF-CBT adherence (e.g., $n_p^2 = .09-.23$; Hanson et al., 2019; Helseth et al., 2020), power analyses indicated a sample size of at least 48 clinicians with data at both CBLC-timepoints were necessary to detect significant CBLC-related effects on supervision and adherence. Additionally, since prior research on supervision-adherence relations has indicated a small-to-large effect size ($f^2 = .11-.42$; Rakovshik et al., 2016; Weck et al., 2016), a sample size of at least 144 clinicians was sufficient to detect a similarly sized effect. These results suggest primary analyses with the archival dataset had sufficient statistical power.

Primary Analyses

Descriptive statistics. Descriptives were computed and reported for the above measures, including TSC-T and TPS scale and subscale scores, at each timepoint.

Inferential statistics. The following analyses were conducted to test the current study's aforementioned hypotheses.

Pre- to post-CBLC changes in supervision quantity. A Cochran's Q-test (Cochran, 1950; Conover, 1999) was utilized to compare pre- to post-CBLC differences between clinicians who reported receiving *any* versus *no* supervision. To determine the magnitude of the difference, the maximum-correlated measure of effect size was used (η^2_Q ; Serlin et al., 1982). To further assess changes in supervision quantity, three paired samples *t*-tests were employed to respectively analyze pre- to post-CBLC changes in therapist-reported (1) supervision duration, (2) frequency of planned supervision, and (3) frequency of informal, unscheduled (i.e., unplanned) supervision. The magnitude of these changes were computed with Cohen's *d* values.

Pre- to post-CBLC changes in supervision quality and adherence. To assess hypothesized pre- to post-CBLC changes in supervision quality and adherence, a pair of repeated measures MANOVA were employed. The first analyzed pre- to post-CBLC changes in therapist-reported (a) general supervision practices and (b) TF-CBT-specific supervision practices, as measured by the TSC-T's *General Supervision Practices* and *TF-CBT-Specific Supervision Practices* subscales, respectively. Similarly, the second MANOVA was utilized to analyze pre- to post-CBLC change in therapist-reported (a) general adherence and (b) TF-CBT-specific adherence, as measured by the corresponding TPS subscales.

Repeated measures MANOVAs were conducted rather than multiple paired-samples *t*-tests or repeated-measures ANOVAs, since MANOVAs can (a) analyze multiple outcome variables (e.g., general and TF-CBT-specific supervision practices) simultaneously, (b) assess patterns between multiple outcome variables, (c) reduce Type I error rates, and (d) thereby reveal differences not otherwise discoverable by ANOVAs (French et al., n.d.; Frost, 2020). To facilitate comparisons of assessed supervision and adherence types, subscale scores were transformed to a consistent metric by dividing each raw subscale score by the number of items in said subscale. If homogeneity assumptions had been violated for either or both MANOVAs, Pillai's trace would have been used. Similarly, if sphericity assumptions had been violated, *p*-values would have been corrected using the Greenhouse-Geisser (if $\epsilon < .75$) or Huynh-Feldt correction (if $\epsilon \geq .75$). All significant main effects were followed by univariate contrasts. For the former, effect sizes were measured by partial-eta squared values; for the latter, Cohen's *d* was used.

Relation between changes in supervision and adherence. To test whether pre- to post-CBLC changes in supervision quality predict changes in therapist-reported adherence, change in both types of supervision and adherence practices were calculated via difference scores (i.e., difference between standardized post- and pre-CBLC scores). Thereafter, multiple multivariate regression analysis were conducted to assess the degree to which changes in both

types of supervision practices (i.e., general vs. TF-CBT-specific) positively predicted changes in both types of adherence (i.e., general vs. TF-CBT specific). Multivariate and follow-up univariate effect sizes were calculated, respectively, with Cohen's f^2 and semi-partial correlations.

Chapter 3: Results

Change in Supervision Quantity

Pre-CBLC, most therapists ($n = 121$; 87.1%) indicated receiving at least some supervision in the 3 months prior to the CBLC; whereas, 18 therapists (12.9%) indicated receiving no supervision. The percentage of therapists reportedly receiving any supervision did not significantly change pre-CBLC (87.1%) to post-CBLC (82.2%), $Q(1) = 1.64$, $p = .20$, $\eta^2_Q = .01$. Among those therapists who reported receiving supervision, the reported frequency of *planned* supervision did not significantly change from pre-CBLC ($Mdn = 3.0$; $M = 2.8$, $SD = 0.9$) to post-CBLC ($Mdn = 3.0$; $M = 2.9$, $SD = 0.9$, $Z = -0.36$, $p = .72$, $r = -.04$); whereas, the reported frequency of *unplanned* supervision decreased significantly from pre-CBLC ($Mdn = 3.0$; $M = 3.2$, $SD = 0.9$) to post-CBLC ($Mdn = 3.0$; $M = 2.9$, $SD = 1.1$, $Z = -2.27$, $p = .02$), to a small degree ($r = -.24$). Still, the reported frequency of both planned and unplanned supervision occurred roughly 2–3 times a month across timepoints. Similarly, the average reported duration of supervision decreased significantly pre- to post-CBLC to a small degree, $t(86) = 2.83$, $d = 0.38$, $p = .006$. Notwithstanding, the average reported duration of supervision was approximately 1 hour at both pre-CBLC ($M = 63.4$ min, $SD = 30.1$) and post-CBLC ($M = 53.9$ min, $SD = 16.0$, M difference = 9.5 min; see Table 1 for a summary of supervision quantity results). Additionally, post-hoc analyses indicated that neither pre- to post-CBLC changes in supervision duration nor frequency, planned or unplanned, significantly predicted changes in either general or TF-CBT-specific adherence ($ps = .05-.86$).

Change in Supervision Quality

As hypothesized, MANOVA results using Wilks' lambda revealed a significant main effect for CBLC time-point, such that supervisee-reported content of in-house supervision (as measured by overall TSC-T scores) significantly increased, pre- to post-CBLC; $F(1, 85) = 9.03$, $p < .01$; to a medium degree, $\eta_p^2 = .10$. A main effect for the type of supervision content was also found, indicating that supervisees reported significantly more general versus TF-CBT-

specific supervision content (as measured by TSCT General and Specific subscales); $F(1, 85) = 52.62, p < .001$; to a large degree, $\eta_p^2 = .40$. This difference was significant across CBLC timepoints, though it was large at pre-CBLC ($d = 0.80, t[85] = 7.44, p < .001$), but only small at post-CBLC ($d = 0.32, t[85] = 2.96, p = .004$).

However, an interaction between CBLC timepoint and type of supervision content was also observed, indicating that the aforementioned pre- to post-CBLC changes in reported supervision content varied significantly by the type of supervision content (i.e., TSC-T subscale); $F(1, 85) = 35.75, p < .001$; to a large degree, $\eta_p^2 = .30$. Specifically, and consistent with study hypotheses, the reported frequency of TF-CBT-specific supervision content increased significantly to a moderate degree, pre- to post-CBLC; $t(85) = 5.18, p < .001, d = 0.56$; such that the average reported frequency of TF-CBT-specific supervision content increased from “rarely” at pre-CBLC ($M = 2.3, SD = 1.2$) to “sometimes” at post-CBLC ($M = 3.0, SD = 0.9$). Contrastingly, general supervision content did not significantly change, pre-CBLC ($M = 3.1, SD = 0.9$) to post-CBLC ($M = 3.1, SD = 0.8$), $t(85) = -0.13, p = .45, d = -.01$; occurring “sometimes”, on average, at both timepoints. Table 1 and Figure 1 summarize these results.

Change in Adherence

As hypothesized, MANOVA results using Wilks’ lambda revealed a significant main effect for CBLC time-point, such that therapist-reported adherence (as measured by TPS scores) with child trauma cases significantly improved pre- to post-CBLC; $F(1, 85) = 10.00, p < .01$; to a moderate degree, $\eta_p^2 = .11$. A main effect for type of adherence was also observed, indicating that therapists, overall, reported significantly greater general versus protocol-specific adherence (as measured TPS subscales) with their child trauma cases, $F(1, 85) = 47.22, p < .001, \eta_p^2 = .36$. Across timepoints, this difference was significant, though it was large at pre-CBLC ($d = 0.95, t[85] = 8.84, p < .001$) but only small at post-CBLC ($d = 0.29, t[85] = 2.72, p = .008$).

Moreover, a significant interaction between CBLC timepoint and adherence type was found, indicating that pre- to post-CBLC improvements in reported adherence varied significantly by adherence type (i.e., TPS subscale); $F(1, 85) = 22.82, p < .001$; to a large degree, $\eta_p^2 = .21$. Follow-up analyses revealed that consistent with study hypotheses, reported TF-CBT-specific adherence improved significantly pre- to post-CBLC; $t(85) = 4.87, p < .001$; to a moderate degree, $d = 0.53$, such that therapists, on average, reported using TF-CBT-specific practice elements with 21%–40% of their child trauma cases, pre-CBLC ($M = 3.1, SD = 1.0$) but with 41%–60% of cases, post-CBLC ($M = 3.6, SD = 0.9$). Comparatively, therapist-reported general adherence also improved, pre-CBLC ($M = 3.6, SD = 1.1$) to post-CBLC ($M = 3.8, SD = 0.9$), but only to a trivial, non-significant degree, $t(85) = 1.42, p = .08, d = 0.15$ (see Table 1 and Figure 2).

Relation Between Supervision and Adherence

Multiple multivariate regression results supported the hypothesis that pre- to post-CBLC changes in supervision content—particularly TF-CBT-specific content—significantly predicted the above pre- to post-CBLC improvements in therapist-reported general and TF-CBT-specific adherence. Indeed, the overall model significantly predicted pre- to post-CBLC changes in both therapist-reported general adherence; $F(2, 82) = 16.61, p < .001, R^2 = .29, R^2_{\text{adjusted}} = .27$; and TF-CBT-specific adherence; $F(2, 82) = 6.88, p = .002, R^2 = .14, R^2_{\text{adjusted}} = .12$; such that pre- to post-CBLC changes in general and TF-CBT-specific supervision content (i.e., TSC-T subscale scores) jointly explained approximately 29% and 14% of the respective variance in pre- to post-CBLC change in therapist-reported general and TF-CBT-specific adherence (i.e., TPS subscale scores). More specifically, increases in TF-CBT-specific supervision and general supervision content both significantly predicted gains in general adherence (TF-CBT-specific supervision: $\beta = .34, 95\% \text{ CI } [.10, .57], p = .006$; general supervision: $\beta = .37, 95\% \text{ CI } [.09, .64], p = .01$). However, only increases in TF-CBT-specific supervision significantly predicted gains in TF-CBT-specific adherence ($\beta = .23, 95\% \text{ CI } [.01, .46], p = .045$); whereas, changes in general

supervision content did not significantly predict change in TF-CBT-specific adherence ($\beta = .19$, 95% CI $[-.07, .46]$, $p = .15$). Indeed, after controlling for pre- to post-CBLC change in general supervision, increases in TF-CBT-specific supervision significantly correlated with CBLC-related increases in both general ($r = .30$, $p = .006$) and TF-CBT-specific adherence ($r = .22$, $p = .04$) to a small-to-moderate degree. Contrastingly, when controlling for change in TF-CBT-specific supervision, change in general supervision significantly correlated only with changes in general adherence to a small-to-moderate degree ($r = .28$, $p = .01$), and not with TF-CBT-specific adherence ($r = .16$, $p = .14$).

Chapter 4: Discussion

Previous research indicates that didactic training alone inadequately promotes fidelitous community-based integration of EBTs, such as TF-CBT. In contrast, evidence-based implementation models—such as LCs and its CBLC augmentation—include additional training and implementation components (e.g., action periods with metrics, expert consultation, and training cases) to better enhance community EBT implementation with fidelity. Nevertheless, the mechanisms by which this adherent EBT adoption occur within the context of a LC (or CBLC) are still being explored. Supervision is one potential mechanism to increase therapist adherence (Aarons, 2009; Carpenter et al., 2012; Swain et al., 2010; Lu et al., 2014). Thus, the present study's primary aims were to examine (1) how supervision quantity (i.e., frequency, duration) and quality (i.e., EBT-specific or general content) changed during a LC (and specifically a TF-CBT-focused CBLC), and (2) the relations between general and EBT-specific supervision and therapists' general as well as protocol-specific adherence.

Pre- to Post-CBLC Changes in Supervision

Supervision Quantity

The present study examined multiple dimensions of supervision quantity at both pre- and post-CBLC, including therapist-reported supervision prevalence, frequency of formal and informal supervision, and duration. In regard to supervision prevalence, the vast majority of CBLC-participating therapists (whose agency role did not include providing clinical supervision) reported receiving at least some in-house supervision pre-CBLC (87.1%), and this proportion did not significantly change at post-CBLC (82.2%). Although contrary to study expectations that supervision would be less common (and thus have significant room to improve), these findings are in line with prior research indicating that most community therapists report receiving at least some in-house supervision (e.g., 82% of 172 CBT therapist participants [Gabbay et al., 1999]; 92% of 383 TF-CBT therapist participants [Kolko et al., 2009]). Collectively, these findings suggest that most community therapists (at least in the United States and Great Britain) may be

receiving in-house supervision. This is encouraging not only since most therapists are required by law to work under supervision (Social Work Guide, 2021), but also because of supervision's empirically validated benefits to both clinicians (e.g., improved fidelity; Mannix et al., 2006; Rakovshik et al., 2016; Sholomskas et al., 2005) and their clients (e.g., improved treatment outcomes; Bambling et al., 2006; Miller et al., 2004).

Notwithstanding, approximately 12%–18% of the sample's non-supervising clinicians reported receiving no supervision across timepoints. Although consistent with other community supervision research (e.g., Gabbay et al., 1999), this non-negligible proportion is concerning given the aforementioned supervision standards. However, some of the clinicians who reportedly did not receive supervision may not have been required to do so by law (e.g., licensed clinical psychologists versus social workers). Unfortunately, therapists' licensure and degree were not assessed during the CBLC, given Project BEST's primary role as a training initiative versus research study. Yet, even if some of the CBLCs' therapists forewent supervision because they were not legally obligated to do so, they might still have benefitted from supervision, particularly when learning a new EBT.

Regardless, among those who indicated receiving supervision, supervision quantity was further assessed in terms of frequency and duration. For frequency, the present study found that a minority of therapists reported receiving weekly supervision, regardless of whether it was planned (pre-CBLC: 29.9%; post-CBLC: 29.9%) or unplanned (pre-CBLC: 46.0%; post-CBLC: 35.6%). Rather, planned and unplanned supervision each occurred reportedly 2–3 times a month on average. Overall, these results largely comport with those from other studies, which found similar therapist-reported rates of weekly supervision across community settings (i.e., 35%–54%; Gabbay et al., 1999; Kolko et al., 2009; Liness et al., 2019). In contrast, research assessing supervision frequency using supervisor- or agency-report (rather than supervisee-report) has reported substantially higher rates of weekly supervision (i.e., 72%–90%; Dorsey et al., 2017; Schoenwald et al., 2008), which may indicate rater-bias effects. Indeed, direct review

of supervision sessions typically indicates that weekly supervision is inconsistent in community settings (and specifically TF-CBT implementation contexts; Dorsey et al., 2018). Taken together, current and previous findings suggest that supervision typically occurs on a weekly to fortnightly basis in community settings.

Notably though, these studies—unlike the present one—did not differentiate between planned and unplanned supervision, but rather investigated supervision on the whole. The one exception was Dorsey and colleagues (2017), which reported high rates of weekly or more planned (i.e., 71.8%) and unplanned supervision (i.e., 75.4%). Both of these values are much higher than the pre- or-post CBLC counterparts observed in the present study, though Dorsey et al.'s (2017) rates were partly based on supervisor- versus solely supervisee-report.

The present study also differs from the above research by its longitudinal nature, particularly in the context of pre- to post-CBLC changes in supervision frequency. Specifically, therapist-reported frequency of *planned* supervision did not significantly change, pre- to post-CBLC. In contrast, therapist-reported frequency of *unplanned* supervision decreased, pre- to post-CBLC, to a small yet significant degree. Potentially, CBLC components (e.g., TF-CBT web course, 2-day TF-CBT learning sessions, action periods with consultation, training cases, and metrics) allowed participants to improve their competency in delivering TF-CBT to the point where they no longer required as much unplanned supervision. In fact, prior evidence suggests that Project BEST's participants generally (69%) found all CBLC components “very” to “extremely useful” in the development of TF-CBT skills (Hanson et al., 2019). Thus, CBLC activities may have improved not only therapists' competency (and thus prompted their supervisors to *offer* less impromptu supervision to address urgent service provision concerns), but these same activities may have improved therapists' clinical self-efficacy, causing them to less frequently *seek* informal supervision). If so, the reported reduction in unplanned supervision would be a small yet significant saving in clinicians' and supervisors' time (i.e., a scarcity in community-practice; Green et al., 2014; Luther et al., 2017; Paris & Hoge, 2010). Alternatively, it

is possible that TF-CBT consultation calls over the course of the CBLC (i.e., 12+ calls) displaced some unplanned supervision. That is, clinicians perhaps did not seek unplanned supervision as often at the end of the CBLC because consultation calls had been filling that need and/or time. Another potential explanation could be that supervisees and supervisors engaged in less frequent informal supervision as the quality (but not quantity) of their supervision (particularly formal/planned supervision) significantly improved, pre- to post-CBLC, potentially leading to increased therapist adherence to TF-CBT.

Yet, regardless of the reason(s) for the changes in reported supervision frequency, frequency is only one facet of supervision quantity. The present study also found that therapist-reported duration of supervision significantly decreased, pre- to post-CBLC. However, the average reported supervision duration remained at about 1 hour at both timepoints, with a mean decrease of less than 10 minutes. Compared to other studies, these findings are on par with Dorsey and colleagues' (2017) retrospective reports of TF-CBT supervision duration (i.e., 75% of clinicians reported 1-hour of supervision per week), but longer than Dorsey and colleagues' (2018) prospective reports of TF-CBT supervision duration (i.e., an average of 26-minute supervision sessions). Still, the small but significant decrease in reported supervision duration (like the decrease in reported frequency of unplanned supervision) may once again suggest a CBLC-related increase in supervision *efficiency*, especially given the study-observed improvements in therapist-reported supervision quality and adherence (discussed below).

Still, the present study found that CBLC-related changes in therapist-reported supervision quantity (either frequency or duration) did not significantly predict therapist-reported adherence (either general or TF-CBT-specific) across or within CBLC timepoints. These findings are similar to those obtained by Liness and colleagues (2019), who reported that neither duration nor frequency significantly predicted clinicians' post-CBT-training outcomes, including adherence. Rather, as noted in the literature review, ample research supports the *quality* of supervision influencing clinician outcomes (e.g., adherence).

Supervision Quality

In regard to supervision quality, the present study examined pre- to post-CBLC changes in supervision content, both general and TF-CBT-specific (as measured by therapists' ratings on the TSC-T). As hypothesized, therapists' reported supervision content significantly improved overall, pre- to post-CBLC, to a moderate degree. This is a novel finding, as no prior study has longitudinally examined the extent to which training, within the context of an LC (TF-CBT-focused or otherwise), is linked with changes in supervision practices, and specifically content.

Nevertheless, three other TF-CBT/LC studies (i.e., Bunger et al., 2018; Cohen & Mannarino, 2008; Ebert et al., 2012) provide some comparison for the present findings. First, Cohen and Mannarino (2008) anecdotally reported that supervision quality for clinicians practicing TF-CBT improved, pre- to post-LC. However, this study neglected to describe its methodology; thus, it is unknown how researchers defined supervision quality (e.g., content vs. techniques), or assessed it (e.g., prospectively vs. retrospectively, clinician- versus supervisor-report, etc.). Second, Ebert and colleagues (2012) reported sustained LC-related increases in "TF-CBT-focused supervision", based on clinicians' retrospective ratings at post-CBLC and during a 1-year follow-up on the "amount and type of TF-CBT supervision". However, this study also failed to note how supervision quantity or quality were operationalized and measured. Third, Bunger and colleagues' (2018) prospectively examined therapist-reported advice-seeking behavior within the context of a TF-CBT-focused LC, and reported that therapists' general and TF-CBT-specific advice-seeking with in-agency clinical supervisors both significantly improved, pre- to post-LC. Although advice-seeking is different from actual supervision, these findings may suggest that CBLC activities in the present study may have increased therapists' advice-seeking of both general and TF-CBT-specific content, in turn, eliciting improvements in reported supervision content. Whether such speculation is accurate or not, these collective findings appear to support the LC's effectiveness at improving supervision quality, and specifically its content.

Results from the present study also elucidated the relative type of supervision content (i.e., general and EBT-specific) that occurs in community settings, particularly in the context of TF-CBT implementation. Specifically, therapists reported that their supervisors more frequently covered general versus TF-CBT-specific content at both pre- and post-CBLC. This finding is in line with prior research, which suggests that community supervisors are more likely to cover general rather than EBT-specific content during supervision (Bearman et al., 2017; Carroll & Rounsaville, 2007), including TF-CBT-specific content (Accurso et al., 2011; Dorsey et al., 2017, 2018; Lucid et al., 2018; Pullman et al., 2018). Particularly within the context of TF-CBT, previous research using both supervisee-report and expert-coding of supervision recordings have found that community supervision typically contains relatively low intensity of TF-CBT-specific content, even with TF-CBT cases (Dorsey et al., 2018; Lucid et al., 2018; Pullmann et al., 2018). Rather, community supervision tends to mainly focus on general clinical content (e.g., case management, treatment engagement; Dorsey et al., 2018; Pullmann et al., 2018) and/or non-clinical content (e.g., administrative work, non-work issues; Pullmann et al., 2018). Notably, Pullmann et al. (2018) also reported that supervisors were more likely to spend supervision covering non-TF-CBT-specific content when they (a) spent more time overall and per case during supervision, (b) had lower knowledge of TF-CBT, and (c) had less training in TF-CBT. In contrast, greater coverage of TF-CBT-specific content in supervision was associated with greater organizational support for TF-CBT and longer supervision duration overall and per case. Therefore, findings from the present study may reflect limited supervisor knowledge of, lack of training in, and poor organizational support for TF-CBT, particularly prior to CBLC participation.

Fortunately, results from the present study suggest LCs (and particularly CBLCs) can significantly improve the relative intensity of EBT-specific supervision content in community settings. As hypothesized, the frequency of TF-CBT-specific supervision content significantly increased pre- to post-CBLC, per therapist-report, to a moderate degree; whereas, general content did not significantly change. Notably, this significant increase in reported TF-CBT-

specific content substantively reduced the gap between reported general and TF-CBT-specific content, from a large disparity at pre-CBLC to a small one at post-CBLC. Moreover, because the reported degree of general supervision did not significantly change pre- to post-CBLC, and reported supervision duration remained relatively the same, pre- to post-CBLC, results may suggest there was still adequate time to cover both general and TF-CBT-specific content. Potentially, this was due to possible reductions in administrative and non-work content (or intensity), which are otherwise highly prevalent in community-based settings (Accurso et al., 2011; Bearman et al., 2017; Carroll & Rounsaville, 2007; Dorsey et al., 2017, 2018; Pullman et al., 2018).

For the present study, the aforementioned improvements in reported supervision content are likely attributable to multiple CBLC components. Namely, the learning sessions and action periods may have influenced clinicians' need and/or desire to seek supervision, specifically TF-CBT-specific supervision content, as they were actively learning a new protocol and working with TF-CBT training cases. Subsequently, this demand for more TF-CBT-specific supervision content may have shifted supervisor practices towards providing more TF-CBT-specific rather than general content, as prior research indicates that supervisee preferences and behaviors substantially account for variance in TF-CBT-specific and general supervision content (Dorsey et al., 2018). Additionally, clinical supervisors were able to participate in CBLC pre-work, learning sessions, training cases, and consultation calls. Consequently, supervisors' TF-CBT-specific knowledge and competency likely increased over the course of their CBLC. In conjunction with CBLC-related increases in organizational support for TF-CBT (Helseth et al., 2020), gains in these factors likely improved supervisors' supervision content, consistent with prior TF-CBT supervision research (Pullmann et al., 2018). Finally, weekly clinician metrics during the CBLC action periods likely increased both supervisees' and supervisors' critical introspection about TF-CBT-specific practice elements in need of improvement. Regardless of the cause(s), the significant pre- to post-CBLC increase in the amount (both relative and

absolute) of reported TF-CBT-specific content is promising, particularly since mounting research posits that EBT-focused supervision significantly improves EBT delivery and client outcomes, primarily by increasing therapists' protocol-specific fidelity (Bearman et al., 2013, 2017; Henggeler et al., 2002; Kitchiner et al., 2006; Liness et al., 2019; Schoenwald et al., 2009; Sheidow et al., 2008).

Pre- to Post-CBLC Changes in Adherence

Indeed, not only did reported supervision content significantly improve, pre- to post-CBLC, but so too did therapists' self-rated adherence to evidence-based practice elements with their child trauma cases. As hypothesized, overall adherence ratings on the TPS improved significantly, pre- to post-CBLC. This improvement is similar to gains in supervisor-, trainer-, and self-rated adherence from other TF-CBT-focused LCs (Amaya-Jackson et al., 2018; Ascienzo et al., 2019; Cohen et al., 2008, 2016; Deblinger et al., 2020; Ebert et al., 2012; Sprang et al., 2019), including CBLCs with related samples that competed the TPS (e.g., Hanson et al., 2019; Helseth et al., 2020). Taken together, these findings further support the use of LCs over one-time workshops, web-trainings, and manual-reading to increase clinician adherence to EBTs (Bearman et al., 2017; Beidas et al., 2012; Beidas & Kendall, 2010; Dorsey et al., 2018; Dimeff et al., 2009; Fixsen et al., 2005; Frank et al., 2019; Herschell et al., 2010; Kavanagh et al., 2008; McHugh & Barlow, 2010; Schoenwald et al., 2004). This finding is salient, as a lack of effective EBT training is considered the key barrier to sustainably disseminate and implement EBTs in community-based settings to optimize client outcomes (Frank et al., 2019; Garland et al., 2010; Gyani et al., 2014; Kilbourne et al., 2018; Shiner et al., 2013; Weissman et al., 2006).

At the same time, results from the present study indicated that therapists' self-rated adherence to evidence-based practice elements differed significantly based on the *type* of practice elements (i.e., general vs. TF-CBT-specific), to a large degree across CBLC timepoints. Namely, at both pre- and post-CBLC, therapists reported using general practice elements with significantly more of their child trauma cases, compared to the percentage of cases with which

they reported using TF-CBT-specific practice elements. This finding is unsurprising as prior research suggests that community clinicians are more likely to use general practice elements than EBT-specific practice elements, particularly those involving exposure (Becker-Haimes et al., 2017; Olatunji et al., 2009). TF-CBT-specific research has repeatedly evinced this same trend, especially with trainer- and trainee-rated adherence to TF-CBT's model-general components (e.g., psychoeducation, relaxation, cognitive coping) versus protocol-differentiating components (e.g., trauma narrative, conjoint caregiver-child sessions; Allen et al., 2012; Ascienzo et al., 2019; Hanson et al., 2014; Woody et al., 2015). This difference may exist due to common EBT-specific adherence barriers in community settings; such as greater perceived or real complexity of EBT-practice elements, lack of funding for EBTs, organizational climates unsupportive of EBTs, and foremost a relative lack of EBT-specific training, supervision, and consultation (Aarons, 2005; Asgardy-Eden & Lee, 2012; Beidas et al., 2014, 2015; Frank et al., 2019; Garland et al., 2010; Greenhalgh et al., 2004; Greer et al., 2013; Gyani et al., 2014; Kilbourne et al., 2018; Lang & Connell, 2016; Land et al., 2017; Lee et al., 2015; Ramanadhan et al., 2012; Schoenwald et al., 2009; Shiner et al., 2013; Weiner et al., 2009; Weissman et al., 2006). Yet, even during and after training, community therapists routinely are viewed (by themselves and their trainers) as having less competence with TF-CBT-specific versus general practice elements (Espeleta et al., 2021; Hanson et al., 2014; Woody et al., 2015), which may explain post-training differences in adherence from this and past TF-CBT studies. Collectively, these findings highlight the need to identify, improve, and implement training models and post-training implementation strategies that focus on improving fidelity to EBT-specific practice elements. This is especially vital in the case of TF-CBT, as optimal client outcomes require therapist fidelity foremost to its protocol-specific components (Amaya-Jackson et al., 2018; Deblinger et al., 2011; Espeleta et al., 2021).

Fortunately, the present study provides some of the first evidence that LCs (and specifically CBLCs) may significantly improve TF-CBT-specific adherence, while not sacrificing

adherence to evidence-based but general (i.e., non-protocol-differentiating) practice elements. Namely, pre- to post-CBLC changes in adherence ratings varied significantly by adherence type (i.e., general and TF-CBT specific). As hypothesized, therapist-reported adherence to TF-CBT-specific practice elements with their child trauma cases improved significantly, pre- to post-CBLC, to a moderate degree; whereas, reported adherence to general practice elements also increased, but only to a trivial, marginally significant degree. Moreover, the gap between reported general and TF-CBT-specific adherence shrunk pre- to post-CBLC from a large to small difference, to the extent that therapists, on average, reported using both evidence-based general and TF-CBT-specific practice elements with most of their child trauma cases, post-CBLC. Overall, these findings mirror those reported by Hanson et al. (2019), which used a related, though larger, sample of therapists (i.e., 136 versus 86) from Project BEST's Phase-3 CBLCs, and found significant, moderate pre- to post-CBLC gains in reported adherence to TF-CBT-specific practice elements (e.g., trauma-related exposures: $d = 0.52$, trauma psychoeducation: $d = 0.68$) with small, significant gains in reported general adherence ($d = 0.26$). Findings from these two studies are the first to simultaneously examine pre- to post-training changes in general and protocol-specific adherence in the context of either TF-CBT or a LC. As previously noted, they also suggest that LCs (or at least CBLCs) can improve EBT-specific adherence (at least for TF-CBT) while not diluting use of adherence to more general, common elements of evidence-based treatment (at least with child trauma cases and per therapist-report). Moreover, past research suggests that the CBLC-related gains in adherence, at least overall (versus protocol-specific or general), were significantly sustained at a 2–4-year follow-up (Helseth et al., 2020).

Despite such convergent, promising results, it remains unknown exactly how and which CBLC components may have contributed to the above improvements in reported adherence. Notably, the CBLCs not only trained clinicians in TF-CBT-specific skills and reduced individual barriers to adherence (e.g., lack of EBT-specific knowledge and/or training [Frank et al., 2019;

Kilbourne et al., 2018; Weissman et al., 2006]), but also targeted organizational factors to reduce intra- and inter-agency barriers to TF-CBT implementation (Hanson et al., 2018; Helseth et al., 2020). For instance, the CBLCs' Learning Sessions (paired with Pre-Work) were designed and implemented by TF-CBT national trainers using best-practice adult educational strategies that combined TF-CBT-specific didactic and experiential learning exercises that were role-specific (Dunst & Trivette, 2009; Stuart et al., 2004; see Hanson et al., 2019). For clinicians, this curriculum not only targeted clinicians' cognitive ability to adherently use TF-CBT-specific practices (e.g., TF-CBT knowledge), but also their motivation to do so (as the learning sessions provided rationale for using TF-CBT, including its evidence-base). The inclusion of interdisciplinary brokers and senior leaders to learning sessions may have helped foster pre- to post-CBLC improvements in organizational support for TF-CBT (Helseth et al., 2020) and interdisciplinary collaboration (Hanson et al., 2019). Apart from learning sessions, subsequent action periods offered therapists the opportunity to practice implementing TF-CBT from start to finish with multiple training cases. During these training cases, adherence was putatively supported via consultation calls with TF-CBT-experts—just as brokers and senior leaders received role-specific consultation that included a focus on how to support therapists' faithful implementation of TF-CBT. Finally, as may have been the case for change in supervision content, weekly metrics assessing therapist fidelity (including adherence to TF-CBT-specific practice elements with training cases) may have led to increased introspection on the part of the therapists, subsequently leading them (and their agency administrators) to actively work on TF-CBT-specific adherence areas in need of improvement. Notably, these same CBLC components may have improved supervisors' motivation, ability, and efforts to improve their supervisees' TF-CBT-specific adherence over the course of the CBLC.

Relation Between Supervision and Adherence

As hypothesized, the CBLC-related improvements in reported supervision content significantly predicted the aforementioned gains in reported adherence. Also as hypothesized,

results indicated that TF-CBT-specific rather than general supervision content was the strongest predictor of pre- to post-CBLC improvements in adherence. Namely, increases in both types of reported supervision content (i.e., TF-CBT-specific and general) uniquely predicted increases in therapist-reported general adherence, both to a significant, moderate degree. In contrast, only pre- to post-CBLC gains in reported TF-CBT-specific content significantly predicted improvements in TF-CBT-specific adherence; whereas, the relation between general supervision content and TF-CBT-specific adherence was trivial and nonsignificant.

These findings are consistent with past research that supports a positive, causal link between supervision quality and EBT-specific fidelity (Bearman et al., 2013, 2017; Mannix et al., 2006; Rakovshik et al., 2016; Schoenwald et al., 2009; Sholomskas et al., 2005). For example, Schoenwald and colleagues' (2009) study of MST training outcomes found that MST-focused—but not general—supervision content significantly improved community therapists' MST-specific adherence (which in turn directly and indirectly predicted significantly better MST client outcomes in terms of internalizing, externalizing, and functional problems). Similar results were obtained by Bearman and colleagues' (2017) experimental study that found that supervision with CBT-specific content significantly outperformed SAU (which had more general content and less CBT-specific content), to a moderate degree in terms of trainees' fidelity to a CBT-specific practice element. Despite these similarities, the present study is the first to examine the relation between training-related changes in TF-CBT-specific supervision and adherence.

Additionally, the current study is the first to investigate supervision-adherence relations in the context of a LC (or CBLC). Notwithstanding, results of the present study also comport with multiple RCTs that found that supervision, when preceded by CBT-specific training workshops, significantly improves therapists' CBT-specific fidelity, particularly when compared to therapists randomly assigned to either (a) training but no supervision or (b) supervision but no training (Mannix et al., 2006; Rakovshik et al., 2016). Thus, the present study's CBLC-related gains in reported TF-CBT-specific adherence were likely due (at least in part) to the synergistic

combination of TF-CBT learning sessions followed by TF-CBT-specific supervision (as well as TF-CBT consultation and metrics) of TF-CBT training cases during CBLC action periods.

As previously noted, CBLC clinical supervisors and supervisees both had the opportunity to participate in TF-CBT-focused training activities (i.e., pre-work, learning sessions) to attain TF-CBT-specific knowledge and skills. During subsequent action periods, CBLC-trained supervisors might have been more likely to *proactively* offer greater TF-CBT-specific supervision, due to increased TF-CBT-specific knowledge, self-efficacy, and perceived organization support (Helseth et al., 2020; Pullmann et al., 2018). Meanwhile, supervisees engaged in TF-CBT training cases may have been more likely to seek TF-CBT-specific supervision, not only from TF-CBT expert consultants, but also from their in-house supervisors (Bunger et al., 2019). Thus, supervisors may also have been more likely to *reactively* provide TF-CBT-specific supervision. Whether provided proactively or reactively, this increase in TF-CBT-specific supervision likely further improved clinicians' TF-CBT knowledge and self-efficacy. This in turn likely helped clinicians more adherently implement what they were taught in CBLC training activities and supervision sessions, particularly in regards to TF-CBT-specific practice elements—which prior to the CBLC, they likely had limited exposure to or competence delivering compared to more general practice elements. During these action periods, consultation calls may have further informed supervisees about what type of supervision they should seek for their training cases (i.e., TF-CBT-specific content). In a similar vein, expert consultation calls may have served to model to supervisors how to provide supervision for TF-CBT cases. Lastly, as mentioned previously, metrics could have led to greater self-reflection and subsequent focus on areas in need of improvement for both supervision and adherence.

Although the exact mechanisms of the LC (and their relative import) remain unknown, findings from the current study provide further support for the CBLC (and LCs by extension), adding to a growing literature base (e.g., Cavaleri et al., 2006, 2010; Duffy et al., 2008; Epstein et al., 2008; Epstein et al., 2010a; Epstein et al., 2010b; Gustafson et al., 2013; Haine-Schlagel

et al., 2013; Hoffman et al., 2008; Katzelnick et al., 2005; McCarty et al., 2007; Meredith et al., 2006; Roosa et al., 2011; Rutkowski et al., 2010; Stephan et al., 2011; Strating & Nieboer, 2010; Vannoy et al., 2011; Versteeg et al., 2012), particularly for TF-CBT implementation (e.g., Amaya-Jackson et al., 2018; Ascienzo et al., 2019; Barnett et al., 2019; Bunger et al., 2018; Cohen et al., 2016; Cohen & Mannarino, 2008; Debliger et al., 2020; Ebert et al., 2012; Hanson et al., 2016, 2018, 2019; Helseth et al., 2020; Lang, 2017; Lang et al., 2015; Saunders & Hanson, 2014; Sprang et al., 2019; Stewart et al., 2020). Additionally, current results strengthen prior research that indicates the importance of EBT-specific supervision to improve and sustain EBT-fidelity, post-training (Bearman et al., 2013, 2017; Mannix et al., 2006; Rakovshik et al., 2016; Schoenwald et al., 2009; Sholomskas et al., 2005). Concurrently, the present study provides the first substantial evidence explicitly linking the LC model with improvements in supervision practices—and how these TF-CBT-specific versus general supervision practices may promote TF-CBT-specific as well as general adherence.

Limitations

Despite the promising aforementioned findings, the current study has several limitations. Indeed, one prominent limitation was the present study's use of archival data from a project that was primarily designed for training and implementation purposes, rather than research. As a consequence, certain variables were not assessed. For example, the CBLC survey did not have supervisees identify their supervisors, which prohibited testing for supervisor-level nesting effects or examining convergence in supervisor-supervisee ratings of supervision and/or adherence. Moreover, as noted above, participants were not queried on their licensure status, making it impossible to know whether or not those who indicated receiving no supervision were actually required to do so by law. Furthermore, the TSC-T did not incorporate a measure of intensity or time spent on various content items. Therefore, the measure may have not adequately captured supervision quality, as intensity of content coverage likely impacts the overall quality of supervision.

Apart from data that Project BEST did *not* collect (and thus could not be analyzed by the present study), there are notable limitations in the data that were collected and analyzed. First, all measures analyzed by the present study (i.e., TSC-T, TPS, quantity items) were therapist-self-report, and thus did not include any supervisor- or trainer-ratings or observational coding by experts. Consequently, the measures used (and their responses) could have been subject to several biases, including social desirability, demand characteristics, and beta change (Allen et al., 2018; Herschell et al., 2019; Hogue et al., 2015; Martino et al., 2009; Peavey et al., 2014; Woody et al., 2015). In regard to the social desirability bias, respondents may have rated (consciously or otherwise) their supervisors and themselves more favorably in terms of supervision practices and adherence than either actually were, which could have inflated results across all CBLC timepoints. As for demand characteristics (APA, 2020), respondents may have provided responses in line with what they believed CBLC trainers were seeking (e.g., low levels of supervision and/or adherence, particularly on TF-CBT-specific items at the pre-CBLC survey, and higher levels of both, post-CBLC). That said, clinicians were not paid or compensated for their completion of the CBLC or its surveys, which may have attenuated demand characteristics. Furthermore, because these were therapist-report measures and not supervisor- or trainer-report measures, there is a possibility that respondents—especially pre-CBLC—did not have the TF-CBT-specific competence necessary to accurately identify content addressed in supervision or their adherent use of specific practice elements, particularly TF-CBT specific ones (Allen et al., 2018). As a result, the pre- to post-CBLC improvements in reported adherence and supervision content may be inflated (or alternatively attenuated if therapists still lacked requisite TF-CBT-specific competence to detect changes in TF-CBT-specific supervision content).

Relatedly, the present study did not assess supervisor perspectives, either of their supervisees (e.g., supervisee adherence, content asked for during supervision) or themselves. Regarding the latter, it would have been helpful to examine potential pre- to post-CBLC changes in supervisors' self-efficacy with TF-CBT supervision (CARES Institute, 2013; MUSC, 2017;

Pullmann et al., 2018; Woody et al., 2015). Supervisor-report would have been essential to measure this personally subjective construct, which cannot be readily assessed indirectly by supervisee-report or via expert observation/coding (Allen et al., 2018), but likely still influences supervision—and by extension, clinician and client—outcomes (Lucid et al., 2018).

Apart from rater-specific biases, all of the measures relied upon retrospective recall of supervisory practices and adherence during supervision and client sessions occurring over a 3-month-span. Although it is uncertain whether this would have positively or negatively skewed the results at either timepoint, the use of 3-month retrospective recall may have reduced the accuracy of results (Allen et al., 2018; Bhar & Beck, 2009; Perepletchikova et al., 2007). Rather, accuracy of data (and confidence in their results) could have been improved by using either retrospective recall using a shorter timeframe or (even better) prospective recording and/or observation of clinician and supervisor practices (e.g., Dorsey et al., 2018; Espeleta et al., 2021; Pullmann et al., 2018; see Allen et al., 2018).

Additionally, individual items and scales used by the present study also had limitations. For example, the four quantity measures were all single-item scales that varied greatly in terms of scales of measurement (i.e., nominal/dichotomous, ordinal, and ratio/continuous), making it challenging to draw solid conclusions from or across these measures. Similarly, anchors on the measures that used Likert scales; such as the supervision frequency items (i.e., “never”, 4 = “once a week or more”), TPS (i.e., “never” to “most of the time”), and TSC-T (i.e., “none” to “81%–100%”); were largely subjective and/or may have truncated the full spectrum of experiences.

A related limitation pertains to the TSC-T’s items and their relative assessment of supervision content versus techniques. Namely, four items on the TSC-T contained explicit references to either supervision techniques alone or techniques and content, so researchers (as previously noted) opted to exclude these four items and only analyze items that were exclusively on supervision content. *Prima facie*, this may have better isolated the potential effect

of supervision content (although results did not significantly change with or without these four items). However, the fact that almost all of the TSC-T's items addressed content, but not techniques, means it was impossible to know what supervision techniques (per therapist-report or otherwise) were being used. Consequently, findings from this study cannot be readily compared to others that have examined gold standard versus SAU techniques, either in the context of TF-CBT implementation (Dorsey et al., 2018; Pullmann et al., 2018) or with other EBTs (Bearman et al., 2013, 2017; Schoenwald et al., 2008). Additionally, the present study could not compare the degree to which supervision techniques versus content (or their interaction) uniquely predicted adherence. This is unfortunate, since as previously noted, optimal supervision quality likely requires evidence-based techniques focused on evidence-based content (e.g., Bearman et al., 2017).

Notwithstanding these limitations related to assessing supervision quality, the present study was notable for having a substantial range in therapist-reported adherence and supervision content, which is essential for detecting associations between adherence and supervision quality. In contrast, the present study's ability to detect relations between adherence and supervision quantity was limited. That is, even though post-hoc analyses indicated that neither frequency nor duration of supervision significantly predicted clinician adherence across CBLC timepoints, the interpretability of this result is hindered by the restricted variability in the sample's reported supervision frequency and duration. To elaborate, the majority of clinicians reported receiving supervision at least 2–3 times a month (85.3%), and of those clinicians, approximately 78.9% reported receiving an average of 45 minutes or more per session. Thus, the vast majority of clinicians may have been receiving (at both timepoints) a minimally sufficient 'dosage' of supervision quantity, such that the influence of supervision quantity on adherence could not be detected. However, if there had been greater variance in supervision quantity (either due to natural variance or experimental control), supervision quantity (i.e., duration and/or frequency) may have been significantly associated with adherence. Moreover, if the

quantity of supervision had been lower (e.g., often occurring less than once a month and only for 15-minutes), the relation between supervision quality and adherence likely would have been attenuated, as evidence-based supervision content (and techniques) requires at least a minimally sufficient level of intensity and time to be efficacious (Dorsey et al., 2018; Lucid et al., 2018; Pullmann et al., 2018).

Additionally, the present study's non-experimental design limits validating the study's hypothesized mechanisms of change (i.e., role of the CBLC in changing supervision quality, and the related putative influence of supervision content on adherence, particularly TF-CBT-specific aspects). According to Weisz and Kazdin (2017), full validation of a mechanism of change requires demonstrating a statistically and practically significant covariation, non-spuriousness (i.e., ruling-out alternative plausible processes not associated with said change), scientific plausibility (i.e., comports with larger scientific literature and validated theories), temporality (i.e., changes in the proposed mediator or mechanism occur before changes in an outcome variable), and experimental manipulation, including testing of gradient or dosage effects of the mechanisms. Importantly, the present study does demonstrate scientific plausibility and temporality in regard to observed changes in supervision (i.e., general and TF-CBT specific) and adherence (i.e., general and TF-CBT specific). However, temporality was not demonstrated in analyses examining how change in supervision (i.e., general and TF-CBT specific) predicted change in adherence (i.e., general and TF-CBT specific), as difference scores were utilized, collapsing timepoints. Furthermore, control conditions were not employed, nor was manipulation of supervision, including gradient manipulation. Taken together, the present study provides preliminary support for supervision acting as a mechanism of change for adherence; however, further research is necessitated to affirm findings.

Contrastingly, neither change in therapist competence nor change in client outcomes were examined. For competence, ample prior research investigated how in-house supervision may improve therapist competence (e.g., Alfonsson et al., 2017; Bearman et al., 2017; Beidas &

Kendall, 2010; Bernard & Goodyear, 2014; Cox et al., 2019; Funderburk et al., 2015; Herschell et al., 2010; Kavanagh et al., 2008; Milne, 2007; Perepletchikova et al., 2007; Powell et al., 2015; Roth et al., 2010; Rousmaniere et al., 2016; Scaife & Inskip, 2001; Schoenwald et al., 2013; Spence et al., 2001), including TF-CBT-specific competence (Dorsey et al., 2018; Lucid et al., 2018; Pullman et al., 2018). More pertinently, evidence suggests LCs may improve not only TF-CBT adherence but also competence (e.g., Amaya-Jackson et al., 2018; Cohen & Mannarino, 2008; Deblinger et al., 2020; Ebert et al., 2012; Espeleta et al., 2021; Stewart et al., 2020). However, this study did not investigate competence, and supervision-related improvements in adherence without similar gains in competence are unlikely to improve client outcomes.

As for client outcomes, substantial research has demonstrated that supervision (e.g., Bambling et al., 2006; Bradshaw et al., 2007; Callahan et al., 2009; Frankel & Piercy, 1990; Miller et al., 2004; Schoenwald et al., 2009; cf., Rousmaniere et al., 2016) and adherence (e.g., Barber et al., 2007; Collyer et al., 2019; Goense et al., 2016; Rapley & Loades, 2018; Webb et al., 2010; Zarafontis-Muller et al., 2014) can improve client outcomes. Moreover, both Amaya-Jackson et al. (2018) and Espeleta et al. (2021) found positive fidelity-outcome relations for TF-CBT clients (and both in the context of a LC). However, the present study did not examine the relation between therapist TF-CBT adherence and TF-CBT client outcomes, or how supervision might moderate that relation. Ultimately, CBLC-related improvements in TF-CBT-specific (or general) adherence mean little if these gains do not translate into better client outcomes, particularly as remediation of trauma-related sequelae is TF-CBT's primary goal (as well as the ultimate aim of a TF-CBT-focused CBLC),

Lastly, the present study examined change in reported supervision practices and adherence over the course of the CBLC and how those pre- to post-CBLC changes in supervision predicted change in adherence. However, the present study did not examine the sustainability of pre- to post-CBLC improvements for either variable. Indeed, little is known

about the sustainment of LC-related training and implementation gains (Ebert et al, 2012; Helseth et al, 2020; Lang et al, 2015, 2016, 2017; Nadeem et al., 2014, 2016). That said, Helseth and colleagues (2020) examined therapist-reported TF-CBT adherence (as measured by overall TPS scores) among clinicians (i.e., practicing supervisors and non-supervising therapists) who participated in one of 10 Project BEST CBLCs. Based on overall TPS scores at pre-CBLC, post-CBLC, and a follow-up approximately 21 months after a CBLC, findings suggested that overall pre- to post-CBLC gains in TF-CBT adherence were, on average, sustained at follow-up (as were other variables related to TF-CBT-specific supervision quality, such as perceived organizational support for TF-CBT). However, this study did not examine sustainment of supervision practices. In contrast, Ebert et al. (2012) reported that pre- to post-LC improvements in TF-CBT-focused supervision quantity and quality were sustained at a 1-year follow-up, though as noted before, their study did not adequately describe their measurement and statistical methods. Moreover, neither of the above studies separately assessed either types of adherence or supervision (i.e., general and TF-CBT-specific). Given these limitations (of present and past research), it is unclear if the pre- to post-CBLC gains in adherence and supervision content (TF-CBT-specific or otherwise) were sustained after CBLC support ended. Thus, further research in this area is needed to determine whether and what additional support may be required post-LC to maintain gains in EBT-specific adherence, particularly because the present study's results suggest supervision only supports EBT-specific adherence when its content is EBT-specific. Thus, sustainment of EBT-specific adherence (at least for TF-CBT) may likely require continued EBT-specific supervision content.

To explain, both Mannix and colleagues' (2006) and Sholomskas and colleagues' (2009) experiments demonstrated that continued in-house supervision post-training not only sustained pre- to post-training gains in therapists' CBT-specific fidelity (and specifically adherence), but also led to significantly *further* post-training improvements during follow-up assessments. Likely, this sustainment (much less additional improvement) can be attributed, at least in part, to the

post-training persistence of supervision, as compared to terminal training components (e.g., pre-work, training cases, learning sessions, and consultation calls). In regard to Project BEST's CBLCs, the continuation of supervision post-CBLC may help to sustain the gains in TF-CBT-specific and general adherence (Helseth et al., 2020), even as the post-CBLC sustained gains in agency-level support for TF-CBTs (Helseth et al., 2020) may have helped to sustain TF-CBT-specific supervision content (Pullmann et al., 2018). Still, subsequent research in this area is necessary to definitively show the merits of the CBLC model, and by extension, any related gains in EBT-specific supervision and adherence.

Implications and Future Directions

Notwithstanding the above limitations, the present study's results inform several pertinent recommendations not only for TF-CBT supervisors and their supervisees, but also for community-based agency administrators and TF-CBT-trainers. To explain, findings from the present study provide preliminary support for supervision serving as a mechanism of change for improving community therapist's adherence, particularly within the context of a TF-CBT-focused LC. Consequently, findings suggest it would behoove TF-CBT supervisors to focus on TF-CBT-specific content, rather than general content, during supervision sessions of TF-CBT cases, so as to best improve their supervisees' adherence to TF-CBT's prescribed general and protocol-specific practice elements. In a similar vein, TF-CBT clinicians should seek supervision that is focused more on TF-CBT-specific, rather than general, content. Still, the ability to provide and seek TF-CBT content likely depends respectively on a supervisor's and supervisee's TF-CBT-specific knowledge and competence. Therefore, senior leaders of agencies providing TF-CBT should facilitate organizational support for TF-CBT (and EBTs in general), including engaging in evidence-based training strategies, including those that comprise LCs (e.g., interdisciplinary pre-work, learning sessions, action periods with training cases, consultation, and metrics). Relatedly, TF-CBT trainers should focus efforts on promoting TF-CBT-specific supervision content in trainings. While these empirically informed recommendations are most applicable to

TF-CBT, as that was the present study's EBT of focus, they may also generalize to other treatment protocols and models, particularly given similar findings with other CBT, non-trauma-focused EBTs (e.g., Bearman et al., 2013, 2017; Mannix et al., 2006; Rakovshik et al., 2016; Schoenwald et al., 2009; Sholomskas et al., 2005). However, future research is necessitated to confirm the generalizability of these findings.

Relatedly, replications are needed to further validate the study's identified mechanisms (Weisz & Kazdin, 2017), and such efforts should attempt to overcome the present study's aforementioned limitations. For instance, future studies should query participants on their licensure status, so as to evaluate whether or not clinicians not receiving supervision are legally required to do so. Additionally, future researchers may add an intensity scale to the TSC-T to account for the time/intensity with which certain content is covered in supervision. Further, researchers should have clinicians identify their supervisors, so as to account for supervisor-level nesting effects. Moreover, future studies should include supervisor-ratings of supervision and adherence, as well as self-efficacy, so as to 1) account for supervisors' unique perspectives, 2) examine convergence of supervisor-supervisee ratings of supervision and adherence, and 3) account for supervisees' potential lack of competence in accurately identifying content addressed in supervision or their relative adherent use of practice elements, particularly protocol-specific ones that may be especially unfamiliar to supervisees.

Beyond supervisor-reports, future studies should also include direct observational measures of both supervision practices and therapist adherence. Direct observational measures would ideally involve extensively trained, independent raters, who are TF-CBT treatment experts and blind to study conditions and hypotheses (Allen et al., 2018; Barber & Crits-Christoph, 1996; Breitenstein et al., 2010). By incorporating these raters, aforementioned biases (e.g., social desirability and demand characteristics) would be reduced. Furthermore, evidence supports direct observations as yielding more valid data, as compared to self-report measures (e.g., Allen et al., 2018; Breitenstein et al., 2010; Perepletchikova et al., 2007). Moreover, direct

observational measures would remedy the aforementioned problem of delayed recall on the part of therapists, as they can occur live or retrospectively through audio- or video-recordings (Allen et al., 2018; Bhar & Beck, 2009). Similarly, direct observational measures could remedy problems related to the subjectivity of anchors for individual items.

More than just improving upon measures, future researchers should advance the current findings with improved study designs. Namely, they should conduct experimental studies, which utilize control conditions, better establish a timeline in which the proposed mechanism (i.e., changes in supervision, both general and EBT-specific) precedes putative effects (i.e., changes in adherence, both general and EBT-specific), and/or manipulate the proposed mechanism(s), including testing of gradient or dosage effects (Weisz & Kazdin, 2017). By conducting experiments in this way, future results may more definitively validate supervision as a mechanism of change for adherence, as the present study alone only provides promising, yet still preliminary evidence.

Additionally, future research should investigate four areas not covered in the current study, including supervisory techniques, treatment competence, client outcomes, and sustainment. First, as the current study focused on supervision content rather than techniques, future research should investigate whether implementation models such as LCs also improve supervision techniques (e.g., general and gold standard), and whether these potential changes also significantly predict change in therapist adherence (i.e., general and EBT-specific). Such an inquiry would be particularly germane, as prior research suggests a significant, positive relation between gold-standard supervision techniques and EBT-specific adherence, both within the context of TF-CBT implementation (Dorsey et al., 2018; Pullmann et al., 2018) and more broadly (Bearman et al., 2013, 2017; Schoenwald et al., 2008). Moreover, comparisons between the degree to which supervision techniques versus content (or their interaction) uniquely predicts adherence could be made.

Future research also should examine if and how changes in supervision practices (i.e., general and TF-CBT-specific) predict changes in clinician competence, both general and TF-CBT-specific) over the course of a LC. This research would be particularly salient, as the competency movement has become a highly relevant topic in mental healthcare, pushing for increased accountability and advocacy in terms of training and supervisory practices rooted in empirical research (APA, 2014). Moreover, such research may inform shifts towards a more competency-based approach to supervision, which is defined as:

A metatheoretical approach that explicitly identifies the knowledge, skills, and attitudes that comprise clinical competencies, informs learning strategies and evaluation procedures, and meets criterion-referenced competence standards consistent with evidence-based practices (regulations), and the local/cultural clinical setting (APA Board of Education Affairs, 2014).

Furthermore, as previously noted, there is already substantial evidence to support in-house supervision improving therapist competence (e.g., Alfonsson et al., 2017; Bearman et al., 2017; Beidas & Kendall, 2010; Bernard & Goodyear, 2014; Cox et al., 2019; Funderburk et al., 2015; Herschell et al., 2010; Kavanagh et al., 2008; Milne, 2007; Perepletchikova et al., 2007; Powell et al., 2015; Roth et al., 2010; Rousmaniere et al., 2016; Scaife & Inskipp, 2001; Schoenwald et al., 2013; Spence et al., 2001), including TF-CBT-specific competence (Dorsey et al., 2018; Lucid et al., 2018; Pullman et al., 2018). Additionally, prior evidence supports LCs in improving not only TF-CBT-specific adherence but also competence (e.g., Amaya-Jackson et al., 2018; Cohen & Mannarino, 2008; Deblinger et al., 2020; Ebert et al., 2012; Espeleta et al., 2021; Stewart et al., 2020). Nevertheless, further investigation is necessary to determine whether supervision is a mechanism of change by which to improve therapist competence, particularly because adherence alone is unlikely to improve client outcomes.

Additionally, researchers should investigate how changes in fidelity, including general and TF-CBT-specific adherence and/or competence, influence client outcomes. As the CBLC

from the present study was concerned with promoting TF-CBT as an EBT for child traumatic stress, it is vital that future research validate mechanisms of change (e.g., adherence) that ultimately improve client outcomes, particularly within the context of a LC or other implementation model. Furthermore, as prior LC research (e.g., Amaya-Jackson et al., 2018; Espeleta et al., 2021) has demonstrated positive fidelity-outcome relations for TF-CBT clients in the context of a LC, future research may add to the literature by examining supervision as a mediator or moderator for this relation.

Lastly, the present study only examined pre- to post-CBLC changes in reported supervision practices and adherence. As previously noted, future studies should investigate whether and how these provisional improvements were sustained. Future examination of sustainment is particularly important because little remains known about the sustainment of LC-related training and implementation gains (Ebert et al, 2012; Helseth et al, 2020; Lang et al, 2015, 2016, 2017; Nadeem et al., 2014, 2016). Notwithstanding, some evidence supports sustainment of CBLC-related gains in TF-CBT adherence and organizational support (Helseth et al., 2020) as well as supervision's ability to sustain if not further improve EBT-specific fidelity, post-training (Mannix et al., 2006; Rakovshik et al., 2016). Still, further research is needed to clarify these outcomes and their relative robustness across EBTs and implementation contexts.

Conclusion

Despite the aforementioned limitations and areas for future research, the present study presents novel findings, suggesting supervision may serve as a mechanism of change for therapist adherence within the context of a CBLC. More specifically, results of this study suggest LC models, and particularly CBLCs, may not only significantly improve the quality (i.e., increased EBT-specific content) of in-house supervision in community-based settings, but also therapist adherence to targeted LCs (i.e., TF-CBT). Moreover, these improvements in supervision content, particularly EBT-focused content, significantly predicted CBLC-related gains in therapist adherence, both general and EBT-specific. Still, these findings are preliminary

and further research is necessitated to more definitively affirm the above findings. Nevertheless, results of the current study suggest dissemination and implementation initiatives should focus on EBT-specific supervision content, as opposed to general content, in order to best support improvement in therapist adherence to both evidence-based general and EBT-specific practice elements.

References

- Aarons, G. A., Ehrhart, M. G., & Farahnak, L. R. (2014). The Implementation Leadership Scale (ILS): Development of a brief measure of unit level implementation leadership. *Implementation Science*, 9(1), 45.
- Aarons, G. A., Fettes, D. L., Flores, L. E. Jr., & Sommerfeld, D. H. (2009). Evidence-based practice implementation and staff emotional exhaustion in children's services. *Behaviour Research and Therapy*, 47(11), 954–960. <https://doi.org/10.1016/j.brat.2009.07.006>
- Aarons, G. A. (2005). Measuring provider attitudes toward evidence-based practice: Consideration of organizational context and individual differences. *Child and Adolescent Psychiatric Clinics of North America*, 14, 255–271. <https://doi.org/10.1016/j.chc.2004.04.008>
- Aarons, G. A., & Sommerfeld, D. H. (2012). Leadership, innovation climate, and attitudes toward evidence-based practice during a statewide implementation. *Journal of the American Academy of Child and Adolescent Psychiatry*, 51(4), 423–431
- Aas, E., Iversen, T., Holt, T., Ormhaug, S. M., & Jensen, T. K. (2018). Cost-effectiveness analysis of Trauma-Focused Cognitive Behavioral Therapy: A randomized control trial among Norwegian youth. *Journal of Clinical Child & Adolescent Psychology*, 48(S1), S298–S311. <https://doi.org/10.1080/15374416.2018.1463535>
- Accurso, E. C., Taylor, R. M., & Garland, A. F. (2011). Evidence-based practices addressed in community-based children's mental health clinical supervision. *Training and Education in Professional Psychology*, 5, 88–96.
- Ai, A. L., Foster, L. J. J., Pecora, P. J., Delaney, N., & Rodriguez, W. (2013). Reshaping child welfare's response to trauma: Assessment, evidence-based intervention, and new research perspectives. *Research on Social Work Practice*, 23, 651–668. <https://doi.org/10.1177/1049731513491835>

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage Publications.
- Albanese, M. A., Mejicano, G., Anderson, M. W., & Gruppen, L. (2010). Building a competency-based curriculum: The agony and the ecstasy. *Advances in Health Sciences Education*, 15(3), 439–454. <https://doi.org/10.1007/s10459-008-9118-2>
- Al, C. M., Stams, G. J. J., Asscher, J. J., & van der Laan, P. H. (2014). A programme evaluation of the Family Crisis Intervention Program (FCIP): Relating programme characteristics to change. *Child & Family Social Work*, 19, 225–236. <https://doi.org/10.1111/j.1365-2206.2012.00896.x>
- Alfonsson, S., Parling, T., Spännargård, Å., Andersson, G., & Lundgren, T. (2018). The effects of clinical supervision on supervisees and patients in cognitive behavioral therapy: A systematic review. *Cognitive Behaviour Therapy*, 47(3), 206 – 228. <https://doi.org/10.1080/16506073.2017.1369559>
- Alfonsson, S., Spännargård, Å., Parling, T., Andersson, G., & Lundgren, T. (2017). The effects of clinical supervision on supervisees and patients in cognitive-behavioral therapy: A study protocol for a systematic review. *Systematic Reviews*, 6, 94.
- Allen, B., & Johnson, J. C. (2012). Utilization and implementation of Trauma-Focused Cognitive-Behavioral Therapy for the treatment of maltreated children. *Child Maltreatment*, 17(1), 80–85. <https://doi.org/10.1177/1077559511418220>
- Allen, J. D., Shelton, R. C., Emmons, K. M., & Linnan, L. A. (2018). Fidelity and its relationship to implementation effectiveness, adaptation, and dissemination. In R. C. Brownson, G. A. Colditz, & E. K. Proctor (Eds.), *Dissemination and Implementation Research in Health* (pp. 267–284). Oxford University Press.
- Amaya-Jackson, L., Hagele, D., Sideris, J., Potter, D., Briggs, E. C., Keen, L., Murphy, R. A., Dorsey, S., Patchett, V., Ake, G. S., & Socolar, R. (2018). Pilot to policy: Statewide

- dissemination and implementation of evidence-based treatment for traumatized youth. *BMC Health Services Research*. <https://doi.org/10.1186/s12913-018-3395-0>
- American Academy of Child and Adolescent Psychiatry (2010). Practice parameters for the assessment and treatment of children and adolescents with posttraumatic stress disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 49, 414–430.
- American Psychological Association (2020). *APA dictionary of psychology*. Author. <https://dictionary.apa.org/demand-characteristics>
- American Psychological Association Board of Educational Affairs Task Force on Supervision Guidelines. (2014). *APA guidelines for clinical supervision in health service psychology*. Retrieved from <https://www.apa.org/about/policy/guidelines-supervision.pdf>
- American Psychological Association Commission on Accreditation. (2015). Standards of accreditation for health service psychology. Retrieved from www.apa.org/ed/accreditation/about/policies/standards-of-accreditation.pdf
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental health disorders* (5th ed.). Author.
- American Psychological Association. (2017). *Ethical principles of psychologists and code of conduct* (2002, amended effective June 1, 2010, and January 1, 2017). <https://www.apa.org/ethics/code>
- American Psychological Association Presidential Task Force on Posttraumatic Stress Disorder and Trauma in Children and Adolescents. (2008). *Children and trauma update for mental health professionals*. American Psychological Association. <https://www.apa.org/pi/families/resources/update.pdf>
- Arczynski, A. V., & Morrow, S. L. (2017). The complexities of power in feminist multicultural psychotherapy supervision. *Journal of Counseling Psychology*, 64, 192–205. <http://dx.doi.org/10.1037/cou0000179>

- Ascienzo, S., Sprang, G., & Eslinger, J. (2020). Disseminating TF-CBT: A mixed methods investigation of clinician perspectives and the impact of training format and formalized problem-solving approaches on implementation outcomes. *Journal of Evaluation in Clinical Practice*. <https://doi.org/10.1111/jep.13351>
- Asgary-Eden, V., & Lee, C. M. (2012). Implementing an evidence-based parenting program in community agencies: What helps and what gets in the way? *Administration and Policy in Mental Health and Mental Health Services Research*, 39, 478–488. <https://doi.org/10.1007/s10488-011-0371-y>
- Assessment of Competency and Benchmarks Work Group (2007). *A developmental model for defining and measuring competence in professional psychology*. Unpublished manuscript.
- Association for Counselor Education and Supervision Taskforce (ACES). (2011). *Supervision Best Practices*. ACES. <https://acesonline.net/wp-content/uploads/2018/11/ACES-Best-Practices-in-Clinical-Supervision-2011.pdf>
- Association of State and Provincial Psychology Boards (ASPPB). (2019). *Supervision guidelines for education and training leading to licensure as a general applied provider*. Retrieved from https://cdn.ymaws.com/www.asppb.net/resource/resmgr/guidelines/supervision_guidelines_for_g.pdf
- Association of State and Provincial Psychology Boards (ASPPB). (2015). *Supervision guidelines for education and training leading to licensure as a health service psychologist*. Retrieved from http://c.ymedn.com/sites/www.asppb.net/resource/resmgr/Guidelines/Final_Supervision_Guidelines.pdf

- Bai, Y., Wells, R., & Hillemeier, M. M. (2009). Coordination between child welfare agencies and mental health service providers, children's service use, and outcomes. *Child Abuse & Neglect*, 33, 372–281. <http://dx.doi.org/10.1016/j.chiabu.2008.10.004>
- Bambling, M., King, R., Raue, P., Schweitzer, R., & Lambert, W. (2006). Clinical supervision: Its influence on client-rated working alliance and client symptom reduction in the brief treatment of major depression. *Psychotherapy Research*, 16(3), 317 – 331. <https://doi.org/10.1080/10503300500268524>
- Barber, J. P., Critsi-Christoph, P., & Luborsky, L. (1996). Effects of therapist adherence and competence on patient outcome in brief dynamic therapy. *Journal of Consulting and Clinical Psychology*, 64, 619–622.
- Barber, J. P., Gallop, R., Crits-Christoph, P., Barrett, M. S., Klostermann, S., McCarthy, K. S., & Sharpless, B. A. (2008). The role of the alliance techniques in predicting outcome of supportive-expressive dynamic therapy for cocaine dependence. *Psychoanalytic Psychology*, 25, 461–482.
- Barber, J. P., Gallop, R., Crits-Christoph, P., Frank, A., Thase, M. E., Weiss, R. D., & Gibbons, M. B. C. (2006). The role of therapist adherence, therapist competence, and alliance in predicting outcome of individual drug counseling: Results from the National Institute Drug Abuse Collaborative Cocaine Treatment Study. *Psychotherapy Research*, 16(2), 229–240. <https://doi.org/10.1080/10503300500288951>
- Barber, J. P., Sharpless, B. A., Klostermann, S., & McCarthy, K. S. (2007). Assessing intervention competence and its relation to therapy outcome: A selected review derived from the outcome literature. *Professional Psychology: Research and Practice*, 38(5), 493–500. <https://doi.org/10.1037/0735-7028.38.5.493>
- Barker, K. K., & Hunsley, J. (2013). The use of theoretical models in psychology supervisor development research from 1994 to 2010: A systematic review. *Canadian*

Psychology/Psychologie Canadienne, 54(3), 176 – 185.

<https://doi.org/10.1037/a0029694>

Barth, R. P., Lee B. R., Collins, K. S., Strieder, F., Chorpita, B. F., Becker, K. D., & Sparks, J. A. (2012). Evidence-based practice at a crossroads: The timely emergence of common elements and common factors. *Research on Social Work Practice*, 22(1), 108–119.

<https://doi.org/10.1177/1049731511408440>

Bartle-Haring, S., Silverthorn, B. C., Meyer, K., Toviesi, P. (2009). Does live supervision make a difference? A multilevel analysis. *Journal of Marital and Family Therapy*, 35(4), 406 – 414. <https://doi.org/10.1111/j.1752-0606.2009.001124.x>

Bartlett, J. D., Barto, B., Griffin, J. L., Fraser, J. G., Hodgdon, H. & Bodian, R. (2016). Trauma-informed care in the Massachusetts Child Trauma Project. *Child Maltreatment*, 21(2), 101–112. <https://doi.org/10.1177/1077559515615700>

Bartlett, J. D., & Smith, S. (2019). The role of early care and education in addressing early childhood trauma. *The American Journal of Community Psychology*, 64, 359–372. <https://doi.org/10.1002/ajcp.12380>

Barnett, E. R., Jankowski, M. K., & Trepman, A. Z. (2019). State-wide implementation and clinical outcomes associated with evidence-based psychotherapies for traumatized youth. *Psychological Trauma: Theory, Research, Practice, & Policy*, 11(7), 775–783.

Batzer, S., Berg, T., Godinet, M. T., & Stotzer, R. L. (2018). Efficacy or chaos? Parent-Child Interaction Therapy in maltreating populations: A review of research. *Trauma, Violence, & Abuse*, 19(1), 3–19.

Bearman, K. S., Schneiderman, R. L., & Zoloth, E. (2017). Building an evidence base for effective supervision practices: An analogue experiment of supervision to increase EBT fidelity. *Administration and Policy in Mental Health*, 44, 293–307.

<https://doi.org/10.1007/s10488-016-0723-8>

- Bearman, K. S., Weisz, J. R., Chorpita, B. F., Hoagwood, K., Ward, A., Ugueto, A. M., & Bernstein, A. (2013). More practice, less preach? The role of supervision process and therapist characteristics in EBP implementation. *Administration and Policy in Mental Health, 40*(6), 518–529. <https://doi.org/10.1007/s10488-013-0485-5>
- Becker-Haimes, E. M., Okamura, K. H., Wolk, C. B., Rubin, R., Evans, A. C., & Beidas, R. S. (2017). Predictors of clinician use of exposure therapy in community mental health settings. *Journal of Anxiety Disorders, 49*, 88–94.
- Beidas, R. S., Edmunds, J., Ditty, M., Watkins, J., Walsh, L., Marcus, S., & Kendall, P. (2014). Are inner context factors related to implementation outcomes in cognitive-behavioral therapy for youth Anxiety? *Administration and Policy in Mental health and Mental Health Services Research, 41*, 788–799. <https://doi.org/10.1007/s10488-013-0529-x>
- Beidas, R. S., Edmunds, J. M., Marcus, S. C., & Kendall, P. C. (2012). Training and consultation to promote implementation of an empirically supported treatment: A randomized trial. *Psychiatric Services, 63*, 660–665. <http://dx.doi.org/10.1176/appi.ps.201100401>
- Beidas, R. S., & Kendall, P.C. (2010). Training therapists in evidence-based practice: A critical review of studies from a systems-contextual perspective. *Clinical Psychology: Science and Practice, 17*, 1–30. <http://dx.doi.org/10.1111/j.1468-2850.2009.01187.x>
- Beidas, R. S., Marcus, S., Aarons, G., Hoagwood, K., Schoenwald, S., Evans, A., Hurford, M., Rubin, R., Hadley, T., Barg, F., Walsh, L., Adams, D., & Mandell, D. (2015). Predictors of community therapists' use of therapy techniques in a large public mental health system. *Journal of the American Medical Association Pediatrics, 169*, 374–382. <https://doi.org/10.1001/jamapediatrics.2014.3736>
- Bernard, J. M., & Goodyear, R. K. (2004). *Fundamentals of clinical supervision* (3rd ed.). Pearson.
- Bernard, J. M., & Goodyear, R. K. (2014). *Fundamentals of clinical supervision* (5th ed.). Pearson.

- Beutler, L. A. (1999). Manualizing flexibility: The training of eclectic therapists. *Journal of Clinical Psychology*, 55(4), 399–404. [https://doi.org/10.1002/\(SICI\)1097-4679\(199904\)55:4<399::AID-JCLP4>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-4679(199904)55:4<399::AID-JCLP4>3.0.CO;2-Z)
- Beveridge, R. M., Fowles, T. R., Masse, J. J., McGoron, L., Smith, M. A., Parrish, B. P., Circo, G., & Widdoes, N. (2015). State-wide dissemination and implementation of parent-child interaction therapy (PCIT): Application of theory. *Children and Youth Services Review*, 48, 38–48.
- Bigfoot, D. S., & Schmidt, S. R. (2010). Honoring children, mending the circle: Cultural adaptation of Trauma-Focused Cognitive Behavioral Therapy for American Indian and Alaska Native children. *Journal of Clinical Psychology*, 66(8), 847–856. <https://doi.org/10.1002/jclp.20707>
- Binder, J. L. (1993). Is it time to improve psychotherapy training? *Clinical Psychology Review*, 13, 301–318.
- Binder, J. L. (2004). *Key competencies in brief dynamic psychotherapy: Clinical practice beyond the manual*. Guilford Press.
- Blackburn, I. M., James, I. A., Mildne, D. L., Baker, C., Standart, S., Garland, A., & Reichelt, F. K. (2001). The revised Cognitive Therapy Scale (CTS-R): Psychometric properties. *Behavioural and Cognitive Psychotherapy*, 29(4), 431–446. <https://doi.org/10.1017/S1352465801004040>
- Blaustein, M., & Kinniburgh, K. (2010). *Treating traumatic stress in children and adolescents: How to foster resilience through attachment, self-regulation, and competency*. Guilford Press.
- Bloomquist, M. L., August, G. L., Lee, S. S., Lee, C. Y. S., Realmuto, G. M., & Klimes-Dougan, B. (2013). Going-to-scale with the Early Risers conduct problems prevention program: Use of a comprehensive implementation support (CIS) system to optimize fidelity,

- participation and child outcomes. *Evaluation and Program Planning*, 38, 19–27.
<https://doi.org/10.1016/j.evalprogplan.2012.11.001>
- Bond, G. R., Becker, D. R., & Drake, R. E. (2011). Measurement of fidelity of implementation of evidence-based practices: Case example of the IPS Fidelity scale. *Clinical Psychology Science and Practice*, 18(2), 126–141.
- Bond, G. R., Drake, R. E., McHugo, G. J., Peterson, A. E., Jones, A. M., & Williams, J. (2012). Long-term sustainability of evidence-based practices in community mental health agencies. *Administration and Policy in Mental Health and Mental Health Services Research*, 41(2), 228–236. <https://doi.org/10.1007/s10488-012-0461-5>
- Bonomi, A. E., Anderson, M. L., Rivara, F. P., Cannon, E. A., Fishman, P. A., Carrell, D., Reid, R. J., & Thompson, R. S. (2008). Health care utilization and costs associated with childhood abuse. *Journal of General Internal Medicine*, 23(3), 294–299.
<https://doi.org/10.1007/s11606-008-0516-1>
- Boxmeyer, C. L., Lochman, J. E., Powell, N. R., Windle, M., & Wells, K. (2008). School counselors' implementation of coping power in a dissemination field trial: Delineating the range of flexibility within fidelity. *Emotional and Behavioral Disorders in Youth*, 79–84, 94–95.
- Bradshaw, T., Butterworth, A., & Mairs, H. (2007). Does structured clinical supervision during psychosocial intervention education enhance outcome for mental health nurses and the service users they work with? *Journal of Psychiatric and Mental Health Nursing*, 14(1), 4 – 12. <https://doi.org/10.1111/j.1365-2850.2007.01021.x>
- Brown, R. C., McLeod, B. D., Southam-Gerow, M. A., Bair, C. E., & Wheat, E. (2012). *Scoring manual for the Common Factor Therapist Competence Scale*. Unpublished instrument.
- Brown, R. C., Southam-Gerow, M. A., McLeod, B. D., Wheat, E. B., Tully, C. B., Reise, S. P., Kendall, P. C., & Weisz, J. R. (2018). The global therapist competence scale for youth

- psychosocial treatment: Development and initial validation. *Journal of Clinical Psychology*, 74(4), 649–664. <https://doi.org/10.1002/jclp.22537>
- Brownson, R. C., Fielding, J. E., & Maylahn, C. M. (2009). Evidence-based public health: A fundamental concept of public health practice. *Annual Review of Public Health*, 30, 175–201.
- Bunger, A. C., Doogan, N., Hanson, R. F., & Birken, S. A. (2018). Advice-seeking during implementation: A network study of clinicians participating in a learning collaborative. *Implementation Science*, 13(101). <https://doi.org/10.1186/s13012-018-0797-7>
- Burns, B.J., Phillips, S.D., Wagner, H.R., Barth, R.P., Kolko, D.J., Campbell, Y., & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child & Adolescent Psychiatry*, 43, 960–970. <https://doi.org/10.1097/01.chi.0000127590.95585.65>
- Burns, M.K., Peters, R., & Noell, G.H. (2008). Using performance feedback to enhance implementation fidelity of the problem-solving team process. *Journal of School Psychology*, 46(5), 537–550. <https://doi.org/10.1016/j.jsp.2008.04.001>
- Byrnes, H.F., Miller, B.A., Aalborg, A.F., Plasencia, A.V., & Keagy, C.D. (2010). Implementation fidelity in adolescent family-based prevention programs: Relationship to family engagement. *Health Education Research*, 25(4), 531–541.
- Callahan, J. L., Almstrom, C. M., Swift, J. K., Borja, S. E., & Heath, C. J. (2009). Exploring the contribution of supervisors to intervention outcomes. *Training and Education in Professional Psychology*, 3(2), 72 – 77. <https://doi.org/10.1037/a0014294>
- Carlson, L., Rapp, C. A., & Eichler, M. S. (2012). The experts rate: Supervisory behaviors that impact the implementation of evidence-based practices. *Community Mental Health Journal*, 48(2), 179–186. <https://doi.org/10.1007/s10597-010-9367-4>
- Carmel, A., Villatte, J. L., Rosenthal, M. Z., Chalker, S., & Comtois, K. A. (2016). Applying technological approaches to clinical supervision in dialectical behavioral therapy: A

- randomized feasibility trial of beg-in-the-eye (BITE) model. *Cognitive and Behavioral Practice*, 23, 221–229. <https://doi.org/10.1016/j.cbpra.2015.08.001>
- Caron, E. B., Muggeo, M. A., Souer, H. R., Pella, J. E., & Ginsburg, G. S. (2020). Concordance between clinician, supervisor and observer ratings of therapeutic competence in CBT and treatment as usual: Does clinician competence or supervisor session observation improve agreement? *Behavioural and Cognitive Psychotherapy*, 48(3), 350–363. <https://doi.org/10.1017/S1352465819000699>
- Carpenter, K. M., Cheng, W. Y., Smith, J. L., Brooks, A. C., Amrhein, P. C., Wain, R. M., & Nunes, E. V. (2012). “Old dogs” and new skills: How clinician characteristics relate to motivational interviewing skills before, during, and after training. *Journal of Consulting and Clinical Psychology*, 80, 560–573. <https://doi.org/10.1037/a0028362>
- Carroll, C., Patterson, M., Wood, S., Booth, A. Rick, J., & Balain, S. (2007). A conceptual framework for implementation fidelity. *Implementation Science*, 2, 40.
- Carroll, K. M., Nich, C., & Rounsaville, B. J. (1997). Contribution of the therapeutic alliance to outcome in active versus control psychotherapies. *Journal of Consulting and Clinical Psychology*, 64, 497–504.
- Carroll, K. M., Nich, C., Sifry, R. L., Nuro, K. F., Frankforter, T. L., Ball, S. A., Fenton, L., & Rounsaville, B. J. (2000). A general system for evaluating therapist adherence and competence in psychotherapy research in the addictions. *Drug and Alcohol Dependency*, 57(3), 225 – 238. [https://doi.org/10.1016/s0376-8716\(99\)00049-6](https://doi.org/10.1016/s0376-8716(99)00049-6)
- Carroll, K. M., & Rounsaville, B. J. (2010). No train, no gain? *Clinical Psychology: Science and Practice*, 17(1), 36–40.
- Castonguay, L. G., & Beutler, L. E. (2006). Principles of therapeutic change: A task force on participants, relationships, and techniques factors. *Journal of Clinical Psychology*, 62(6), 631–638. <https://doi.org/10.1002/jclp.20256>

- Castonguay, L. G. (1993). 'Common factors' and 'nonspecific variables': Clarification of the two concepts and recommendations for research. *Journal of Psychotherapy Integration* 3(3), 267–286. <https://doi.org/10.1037/h0101171>
- Castonguay, L. G., Goldfried, M. R., Wiser, S., Raue, P. J., & Hayes, A. M. (1996). Predicting the effect of cognitive therapy for depression: A study of unique and common factors. *Journal of Consulting and Clinical Psychology*, 64, 497–504.
- CATS Consortium. (2010). Implementation of CBT for youth affected by the World Trade Center disaster: Matching need to treatment intensity and reducing trauma symptoms. *Journal of Traumatic Stress*, 23, 699–707.
- Cavaleri, M. A., Franco, L. M., McKay, M. M., Appel, A., Bannon, W. M., Bigley, M. F., Fazio, M., Gopalan, G., Harrison, M., Salerno, A., & Thaler, S. (2007). The sustainability of a learning collaborative to improve mental health service use among low-income urban youth and families. *Best Practices in Mental Health*, 3, 52–61.
- Cavaleri, M. A., Gopalan, G., McKay, M. M., Appel, A., Bannon, W. M., Bigley, M. F., Fazio, M., Harrison, M., Nayowith, G., Salerno, A., Sher, T., & Thaler, S. (2006). Impact of a learning collaborative to improve child mental health service use among low-income urban youth families. *Best Practices in Mental Health*, 2, 67–79.
- Cavaleri, M. A., Gopalan, G., McKay, M. M., Messam, T., Velez, E., & Elwyn, L. (2010). The effect of a learning collaborative to improve engagement in child mental health services. *Children and Youth Services Review*, 32, 281–285.
- Chadwick Center for Children and Families. (2004). *Closing the quality chasm in child abuse treatment: Identifying and disseminating best practices*. Author.
- Charmandari, E., Tsigos, C., & Chrousos, G. (2005). Endocrinology of the stress response 1. *Annual Review of Physiology*, 67, 259–284.
- Chaudoir, S. R., Dugan, A. G., & Barr, C. H. (2013). Measuring factors affecting implementation of health innovations: A systematic review of structural, organizational, provider, patient,

- and innovation level measures. *Implementation Science*, 8, 1–20.
<http://dx.doi.org/10.1186/1748-5908-8-22>
- Chinchilla, P. (2007). Comorbidity as a moderator of process-outcome relations in individual and family therapy for adolescent substance abuse. Fordham University.
- Chorpita, B. F., Becker, K. D., Daleiden, E. L. (2007). Understanding the common elements of evidence-based practice: Misconceptions and clinical examples. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(5), 647–652.
<https://doi.org/10.1097/chi.0b013e318033ff71>
- Chorpita, B.F., & Daleiden, E.L. (2009). Mapping evidence-based treatments for children and adolescents: Application of the distillation and matching model to 615 treatments from 322 randomized trials. *Journal of Consulting and Clinical Psychology*, 77(3), 566–579.
<https://doi.org/10.1037/a0014565>
- Chorpita, B. F., Daleiden, E. L., & Weisz, J. R. (2005). Identifying and selecting the common elements of evidence-based interventions: A distillation and matching model. *Mental Health Services Research*, 7, 5–20.
- Choy-Brown, M., & Stanhope, V. (2017). The availability of supervision in routine mental health care. *Clinical Social Work Journal*, 46, 271–280. <https://doi.org/10.1007/s10615-018-0687-0>
- Chuang, E., & Lucio, R. (2011). Interagency collaboration between child welfare agencies, schools, and mental health providers and children’s mental health service receipt. *Advances in School Mental Health Promotion*, 4(2), 4–15.
- Chu, A.T., & Lieberman, A.F. (2010). Clinical implications of traumatic stress from birth to age five. *Annual Review of Clinical Psychology*, 6, 469–494.
- Claiborn, C.D., Goodyear, R. K., & Horner, P. A. (2002). Feedback. In J. C. Norcross (Ed.), *Psychotherapy Relationships That Work* (pp. 217–233). Oxford University Press.

- Coady, C. A., Kent, V. D., & Davis, P. W. (1990). Burnout among social workers working with patients with cystic fibrosis. *Health & Social Work, 15*, 116–124.
<https://doi.org/10.1093/hsw/15.2.116>
- Cochran, W. G. (1950). The comparison of percentages in matched samples. *Biometrika, 37*, 256–266.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed). Lawrence Erlbaum Associates, Inc.
- Cohen, J. A., Deblinger, E., Mannarino, A. P., & Steer, R. A. (2004). A multisite, randomized controlled trial for children with sexual abuse-related PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 393–402.
- Cohen, J.A., & Mannarino, A.P. (1996a). A treatment outcome study for sexually abused preschooler children: Initial findings. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*(1), 42–50.
- Cohen, J.A., & Mannarino, A.P. (1997). A treatment study of sexually abused preschool children: Outcome during one-year follow-up. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*(9), 1228–1235.
- Cohen, J. A., Mannarino, A. P., Deblinger, E., & Berliner, L. (2009). Cognitive-behavioral therapy for children and adolescents. In E. B. Foa, T. M. Keane, M. Friedman, & J. A. Cohen (Eds.), *Effective treatments for PTSD: Practice guidelines from the international society for traumatic stress studies*. Guilford.
- Cohen, J.A., Mannarino, A.P., & Deblinger, E. (2017). *Treating Trauma and Traumatic Grief in Children and Adolescents* (2nd ed.). The Guilford Press.
- Cohen, J. A., & Mannarino, A. P. (2008). Disseminating and implementing trauma-focused CBT in community settings. *Trauma Violence Abuse, 9*(4), 214–226.
<https://doi.org/10.1177%2F154838008324336>

- Cohen, J.A., & Mannarino, A.P. (1996). Factors that mediate treatment outcome of sexually abused preschool children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35(10), 1402–1410.
- Cohen, J.A., & Mannarino, A.P. (1998a). Interventions for sexually abused children: Initial treatment findings. *Child Maltreatment*, 3(1), 17–26.
- Cohen, J.A., & Mannarino, A.P. (1998b). Factors that mediate treatment outcome of sexually abused preschoolers: Six and 12-month follow-ups. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 44–51.
- Cohen, J.A., Mannarino, A.P., & Iyengar, S. (2011). Community treatment of PTSD for children exposed to intimate partner violence: A randomized controlled trial. *Archives of Pediatrics and Adolescent Medicine*, 165, 16–21.
- Cohen, J. A., Mannarino, A. P., Jankowski, K., Rosenberg, S., Kodya, S., & Wolford, G. L. II. (2016). A randomized implementation study of Trauma-Focused Cognitive Behavioral Therapy for adjudicated teens in residential treatment facilities. *Child Maltreatment*, 21(2), 156–167. <https://doi.org/10.1177/1077559515624775>
- Cohen, J. A., Mannarino, A. P., & Knudsen, K. (2004). Treating childhood traumatic grief: A pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 1225–1233.
- Cohen, J. A., Mannarino, A. P., & Knudsen, K. (2005). Treating sexually abused children: 1-year follow-up of a randomized controlled trial. *Child Abuse and Neglect*, 29(2), 135–145.
- Cohen, J. A., Mannarino, A. P., & Murray, L.A. (2011). Trauma-focused CBT for youth who experience ongoing trauma. *Child Abuse and Neglect*, 35, 637–646.
- Cohen, J. A., Mannarino, A. P., Perel, J. M., & Staron, V. (2007). A pilot randomized controlled trial of combined trauma-focused CBT and sertraline for childhood PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46, 811–819.

- Cohen, J. A., Mannarino, A. P., & Staron, V. (2006). A pilot study of modified cognitive behavioral therapy for children with traumatic grief. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45, 1465–1473.
- Cohen, J. A., & Mannarino, A. P. (2011). Supporting children with traumatic grief: What educators need to know. *School Psychology International*, 32, 117–131.
- Cohen, L. R., Hien, D. A., & Batchelder, S. (2008). The impact of cumulative maternal trauma and diagnosis on parenting behavior. *Child Maltreatment*, 13, 27–38.
<http://dx.doi.org/10.1177/1077559507310045>
- Collyer, H., Eisler, I., & Woolgar, M. (2019). Systematic literature review and meta-analysis of the relationship between adherence, competence and outcome in psychotherapy for children and adolescents. *European Child and Adolescent Psychiatry*.
<https://doi.org/10.1007/s00787-018-1265-2>
- Conover, W. J. (1999). *Practical nonparametric statistics* (3rd Ed.). Wiley.
- Cox, J. R., Martinez, R. G., & Southam-Gerow, M. A. (2019). Treatment integrity in psychotherapy research and implications for the delivery of quality mental health services. *Journal of Consulting and Clinical Psychology*, 87(3), 221–233.
<http://dx.doi.org/10.37/ccp0000370>
- Creed, T. A., Frankel, S. A., German, R. E., Green, K. L., Jager-Hyman, S., Taylor, K. P., Adler, A. D., Wolk, C. B., Stirman, S. W., Waltman, S. H., Williston, M. A., Sherrill, R., Evans, A. C., & Beck, A. T. (2016). Implementation of transdiagnostic cognitive therapy in community behavioral health: The Beck Community Initiative. *Journal of Counseling and Clinical Psychology*, 84(12), 1116 – 1126. <https://doi.org/10.1037/ccp0000105>
- Crits-Christoph, P., & Gibbons, M. B. C. (2002). Relational interpretations. In J.C. Norcross (Ed.), *Psychotherapy relationships that work* (pp. 285–300). Oxford University Press.
- Cross, D., Vance, L. A., Kim, Y. J., Ruchard, A. L., Fox, N., Jovanovic, T., & Bradley B. (2018). Trauma exposure, PTSD, and parenting in a community sample of low-income,

- predominantly African American mothers and children. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10, 327–335. <http://dx.doi.org/10.1037/tra0000264>
- Cummings, J. A., Ballantyne, E. C., & Scallion, L. M. (2015). Essential processes for cognitive behavioral clinical supervision: Agenda setting, problem solving, and formative feedback. *Psychotherapy*, 52(2), 158 – 163. <https://doi.org/10.1037/a0038712>
- Dagenais, C., Briere, F. N., Gratton, G., & Dupont, D. (2009). Brief and intensive family support program to prevent emergency placements: Lessons learned from a process evaluation. *Child and Youth Services Review*, 31, 594–600. <https://doi.org/10.1016/j.childyouth.2008.11.001>
- Damra, J. K. M., Nassar, Y. H., & Ghabri, T. M. F. (2014). Trauma-Focused Cognitive Behavioral Therapy: Cultural adaptations for application in Jordanian culture. *Counselling Psychology Quarterly*, 27(3), 308–323. <https://doi.org/10.1080/09515070.2014.918534>
- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science*, 4(1), 50.
- Dane, A. V., & Schneider, B. H. (1998). Program integrity in primary and early secondary prevention: Are implementation effects out of control? *Clinical Psychology Review*, 18, 23–24.
- Danielson, C. K. (2007). *Risk Reduction through Family Therapy (RRFT): Treatment manual*. National Crime Victims Research & Treatment Center, Medical University of South Carolina.
- Davidson, T. M., Bunnell, B. E., Saunders, B. E., Hanson, R. F., Danielson, C. K., Cook, D., Chu, B. C., Dorsey, S., Adams, Z. W., Anderwes, A. R., Walker, J. H., Soltis, K. E., Cohen, J. A., Deblinger, E., & Ruggiero, K. J. (2019). Pilot evaluation of a tablet-based

- application to improve quality of care in child mental health treatment. *Behavior Therapy*, 50(2), 367–379. <https://doi.org/10.1016/j.beth.2018.07.005>
- De Arellano, M. A. R., Lyman, R. D., Jobe-Shields, L., George, P., Dougherty, R. H., Daniels, A. S., Ghose, S. S., Huang, L., & Delphin-Rittmon, M. E. (2014). Trauma-focused cognitive-behavioral therapy for children and adolescents: Assessing the evidence. *Psychiatric Services*, 65(5), 591–602. <https://doi.org/10.1176/appi.ps.201300255>
- De Bellis, M. D., & Zisk, A. (2014). The biological effects of childhood trauma. *Child and Adolescent Psychiatric Clinics of North America*, 23(2), 185–222. <https://doi.org/10.1016/j.chc.2014.01.002>
- Deblinger, E., Behl, L. E., & Glickman, A. R. (2006). Treating children who have experienced sexual abuse. In P. C. Kendall (Ed.), *Child and adolescent therapy: Cognitive behavioral procedures* (3rd ed., pp. 383–416). Guilford Press.
- Deblinger, E., Cohen, J. A., Mannarino, A. P., Murray, L. A., & Epstein, C. (2008) *TF-CBT fidelity checklist* (unpublished instrument). UMDNJ-SOM CARES Institute.
- Deblinger, E., Cohen, J., Runyon, M., & Hanson, R. F. (2005). *Clinical Practices Questionnaire*. Unpublished instrument.
- Deblinger, E., & Heflin, A. H. (1996). *Treating sexually abused children and their nonoffending parents: A cognitive behavioral approach*. Sage Publications.
- Deblinger, E., Mannarino, A. P., Cohen, J. A., Runyon, M. K., & Steer, R. (2011). Trauma-Focused Cognitive Behavioral Therapy for children: Impact of the trauma narrative and treatment length. *Depression and Anxiety*, 28, 67–75.
- Deblinger, E., Pollio, E., Cooper, B., & Steer, R. A. (2020). Disseminating Trauma-Focused Cognitive Behavioral Therapy with a systematic self-care approach to addressing secondary traumatic stress: PRACTICE what you preach. *Community Mental Health Journal*. <https://doi.org/10.1007/s10597-020-00602-x>

- Deblinger, E., Pollio, E., Runyon, M. K., & Steer, R. A. (2016). Improvements in personal resiliency among youth who have completed trauma-focused cognitive behavioral therapy. *Child Abuse & Neglect*, 65, 132–139.
- Deblinger, E., Stauffer, L. B., & Steer, R. (2001). Comparative efficacies of supportive and cognitive-behavioral group therapies for young children who have been sexually abused and their non-offending mothers. *Child Maltreatment*, 6, 332–343.
- Deblinger, E., Steer, R. A., & Lippmann, J. (1999). Two-year follow-up study of cognitive behavioral therapy for sexually abused children suffering post-traumatic stress symptoms. *Child Abuse and Neglect*, 23(12), 1371–1378. [https://doi.org/10.1016/S0145-2134\(99\)00091-5](https://doi.org/10.1016/S0145-2134(99)00091-5)
- Deci, P. A., Santos, A. B., Hiott, W. D., Schoenwald, S., & Dias, J. K. (1995). Dissemination of assertive community treatment programs. *Psychiatric Services*, 46(7), 676–678. <https://doi.org/10.1176/ps.46.7.676>
- DeRubeis, R. J., & Feeley, M. (1990). Determinants of change in cognitive therapy for depression. *Cognitive Therapy and Research*, 14, 469–482.
- Diehle, J., Opmeer, B. C., Boer, F., Mannarino, A. P., & Lindauer, R. J. L. (2015). Trauma focused cognitive behavioral therapy or eye movement desensitization and reprocessing: What works in children with posttraumatic stress symptoms?: A randomized controlled trial. *European Child and Adolescent Psychiatry*, 24, 227–236.
- DiGennaro, F. D., Martens, B. K., & McIntyre, L. L. (2005). Increasing treatment integrity through negative reinforcement: Effects on teacher and student behavior. *School Psychology Review*, 34(2), 220.
- Dorsey, S., Kerns, S. E., Lucid, L., Pullmann, M. D., Harrison, J. P., Berliner, L., & Deblinger, E. (2018). Objective coding of content and techniques in workplace-based supervision of an EBT in public mental health. *Implementation Science*. <https://doi.org/10.1186/s13012-017-0708-3>.

- Dorsey, S. McLaughlin, K. A., Kerns, S. E. U., Harrison, J. P., Lambert, H. K., Briggs, E. C., Cox, J. R., & Amaya-Jackson, L. (2017). Evidence base update to psychosocial trauma treatments for children and adolescents exposed to traumatic events. *Journal of Clinical Child and Adolescent Psychology, 46*(3), 303–330.
- Dorsey, S., Pullmann, M. D., Berliner, L., Koschmann, E., McKay, M., & Deblinger, E. (2014). Engaging foster parents in treatment: A randomized trial of supplementing Trauma-Focused Cognitive Behavioral Therapy with evidence-based engagement strategies. *Child Abuse and Neglect, 38*(9), 1508–1520.
<https://doi.org/10.1016/j.chiabu.2014.03.020>
- Dozier, M. (2010). *Attachment and Biobehavioral Catch-up*. University of Delaware.
- Drake, R. E., Torrey, W. C., & McHugo G. J. (2003). Strategies for implementing evidence-based practices in routine mental health settings. *Evidence Based Mental Health, 6*(1), 6–7.
- Duffy, F. F., Chung, H., Trivedi, M., Rae, D. S., Regier, D. A., & Katzelnick, D. J. (2008). Systematic use of patient-rated depression severity monitoring: Is it helpful and feasible in clinical psychiatry? *Psychiatric Services, 59*, 1148–1154.
- Dunn, E. C., Nishimi, K., Powers, A., & Bradley, B. (2017). Is developmental timing of trauma exposure associated with depressive and post-traumatic stress disorder symptoms in adulthood? *Journal of Psychiatric Research, 84*, 119–127.
- Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology, 41*, 327–350.
- Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research, 18*(2), 237–256. <https://doi.org/10.1093/her/18.2.237>

- Dye, H. (2018). The impact and long-term effects of childhood trauma. *Journal of Human Behavior in the Social Environment* 28(3), 381–392.
<https://doi.org/10.1080/10911359.2018.1435328>
- Eames, C., Daley, D., Hutchings, J., Hughes, J. C., Jones, K., Martin, P., & Bywater, T. (2008). The Leader Observation Tool: A process skills treatment fidelity measure for the Incredible Years parenting programme. *Child: Care, Health and Development*, 34(3), 391–400. <https://doi.org/10.1111/j.1365-2214.2008.00828.x>
- Ebert, L., Amaya-Jackson, L., Markiewicz, J. M., Kisiel, C., & Fairbank, J. A. (2012). Use of the breakthrough series collaborative to support broad and sustained use of evidence-based trauma treatment for children in community practice settings. *Administration and Policy in Mental Health and Mental Health Services Research*, 39(3), 187–199.
<https://doi.org/10.1007/s10488-011-0347-y>
- Edmunds, J. M., Beidas, R. S., & Kendall, P. C. (2013). Dissemination and implementation of evidence-based practices: Training and consultation as implementation strategies. *Clinical Psychology: Science and Practice*, 20(2), 152 – 165.
<https://doi.org/10.1111/cpsp.12031>
- Ehrenreich-May, J., Southam-Gerow, M. A., Hourigan, S. E., Wright, L. R., Pincus, D. B., & Weisz, J. R. (2011). Characteristics of anxious and depressed youth seen in two different clinical contexts. *Administration and Policy in Mental Health and Mental Health Services Research*, 38(5), 398–411. <https://doi.org/10.1007/s10488-010-0328-6>
- Elliott, R., Bohart, A. C., Watson, J. C., & Greenberg, L. S. (2011). Empathy. *Psychotherapy*, 48(1), 43–49.
- Ellis M. V. (1991). Critical incidents in clinical supervision and in supervisor supervision: Assessing supervisory issues. *Journal of Counseling Psychology*, 38(3), 342–349.
<https://doi.org/10.1037/0022-0167.38.3.342>

- Ellis, M. V. (2001). Harmful supervision, a cause for alarm: Comment on Gray et al. (2001) and Nelson and Friedlander (2001). *Journal of Counseling Psychology*, 48(4), 401–406.
<https://doi.org/10.1037/0022-0167.48.4.401>
- Ellis, M. V., Hutman, H., & Deihl, L. M. (2013). Chalkboard case conceptualization: A method for integrating clinical data. *Training and Education in Professional Psychology*, 7(4), 246–256. <https://doi.org/10.1037/a0034132>
- Epstein, J. N., Langberg, J. M., Lichtenstein, P. K., Altaye, M., Brinkman, W. B., House, K., & Stark, L. J. (2010a). Attention-deficit/hyperactivity disorder outcomes for children treated in community-based pediatric settings. *Archives of Pediatrics and Adolescent Medicine*, 164, 160–165.
- Epstein, J. N., Langberg, J. M., Lichtenstein, P. K., Kolb, R. C., & Stark, L. J. (2010b). Sustained improvement in pediatricians' ADHD practice behaviors in the context of a community-based quality improvement initiative. *Children's Health Care*, 39, 296–311.
- Epstein, J. N., Langberg, J. M., Lichtenstein, P. K., Mainwaring, B. A., Luzader, C. P., & Stark, L. J. (2008). Community-wide intervention to improve the attention-deficit/hyperactivity disorder assessment and treatment practices of community physicians. *Pediatrics*, 122, 19–27.
- Epstein, R. M., & Hundert, E. M. (2002). Defining and assessing professional competence. *JAMA*, 287(2), 226–235. <https://doi.org/10.1001/jama.287.2.226>
- Espeleta, H. C., Peer, S., Are, F., & Hanson, R. F. (2021). Therapists' perceived competence in Trauma-Focused Cognitive Behavioral Therapy and client outcomes: Findings from a community-based learning collaborative. *Child Maltreatment*.
- Eyberg, S. M., & Funderburk, B. (2011). *Parent-Child Interaction Therapy protocol*. PCIT International, Inc.
- Falender, C. A., & Shafranske, E. P. (2004). *Clinical supervision: A competency-based approach*. American Psychological Association.

- Falender, C. A., & Shafranske, E. P. (2014). Clinical supervision: The state of the art. *Journal of Clinical Psychology, 70*(11), 1030–1041. 10.1002/jclp.22124
- Falender, C. A., & Shafranske, E. P. (2007). Competence in competency-based supervision practice: Construct and application. *Professional Psychology, Research and Practice, 38*(3), 232–240. <https://doi.org/10.1037/0735-7028.38.3.232>
- Falender, C. A., Shafranske, E. P., & Falicov, C. (Eds.). (2014). Multiculturalism and diversity in clinical supervision: A competency-based approach. American Psychological Association.
- Falender, C. A., & Shafranske, E. P. (2013). Supervision. In B. Johnson & N. Kaslow (Eds.), *Oxford handbook of education and training in professional psychology*.
- Fang, X., Brown, D. S., Florence, C. S., & Mercy, J. A. (2012). The economic burden of child maltreatment in the United States and implications for prevention. *Child Abuse and Neglect, 36*, 156–165.
- Farber, B. A., & Doolin, E. M. (2011). Positive regard. *Psychotherapy, 48*(1), 58–64.
- Farmer, C.C., Mitchell, K. S., Parker-Guilbert, K., & Galovksi, T. E. (2017). Fidelity to the Cognitive Processing Therapy protocol: Evaluation of critical elements. *Behavior Therapy, 48*, 195–206. <https://doi.org/10.1016/j.beth.2016.02.009>
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175–191.
- Feeley, M., DeRubeis, R. J., & Gelfand, L. (1999). The temporal relation of adherence and alliance to symptom change in cognitive therapy for depression. *Journal of Consulting and Clinical Psychology, 67*, 578–582.
- Finkelhor, D., Turner, H. A., Shattuck, A., & Hamby, S. L. (2013). Violence, crime, and abuse exposure in a national sample of children and youth: An update. *JAMA Pediatrics, 167*(7), 614–621.

- Fish, D., & de Cossart, L. (2006). Thinking outside the [tick] box: Reasserting professionalism and professional judgement. *Medical Education*, 40, 403–405.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature* (FMHI publication no. 231). Tampa University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network.
- Follette, W. C., & Callaghan, G. M. (1995). Do as I do, not as I say: A behavior-analytic approach to supervision. *Professional Psychology: Research and Practice*, 26(4), 413 – 421. <https://doi.org/10.1037/0735-7028.26.4.413>
- Follette, W. C., & Greenberg, L. S. (2006). Techniques factors in treating dysphoric disorders. In L.G. Castonguay & L. E. Beutler (Eds.), *Principles of therapeutic change that work* (pp. 83–109). Oxford University Press.
- Ford, J. K., & Weissbein, D. A. (1997). Transfer of training: An update review and analysis. *Performance Improvement Quarterly*, 10, 22 – 41.
- Forgatch, M. S., Patterson, G. R., & Gewirtz, A. H. (2013). Looking forward: The promise of widespread implementation of parent training programs. *Perspectives on Psychological Science*, 8(6), 682 – 694. <https://doi.org/10.1177/1745691613503478>
- Fouad, N. A., Grus, C. L., Hatcher, R. L., Kaslow, N. J., Hutchings, P. S., Madson, M. B., Collins, F. L., & Crossman, R. E. (2009). Competency benchmarks: A model for understanding and measuring competence in professional psychology across training levels. *Training and Education in Professional Psychology*, 3(4), S5–S26. <https://doi.org/10.1037/a0015832>
- Foxwell, A. A., Kennard, B. D., Rodgers, C., Wolfe, K. L., Cassedy, H. F., & Thomas, A. (2017). Developing a peer mentorship program to increase competence in clinical supervision in clinical psychology doctoral training programs. *Academic Psychiatry*, 41, 828–832. <https://doi.org/10.1007/s40596-017-0714-4>

- Frankel, B. R., & Piercy, F. P. (1990). The relationship among selected supervisory, therapist, and client behaviors. *Journal of Marital and Family Therapy*, 16(4), 407 – 421.
<https://doi.org/10.1111/j.1752-0606.1990.tb00059.x>
- Frank, J. R., Snell, L. S., Cate, O. T., Holmboe, E. S., Carraccio, C., Swing, S. R., Harris, P., Glasgow, N. J., Campbell, C., Dath, D., Harden, R. M., Iobst, W., Long, D. M., Mungroo, R., Richardson, D. L., Sherbino, J., Silver, I., Taber, S., Talbot, M., & Harris, K. A. (2010). Competency-based medical education: Theory to practice. *Medical Teacher*, 32(8), 638–645. <https://doi.org/10.3109/0142159X.2010.501190>
- Freitas, G. J. (2002). The impact of psychotherapy supervision on client outcome: A critical examination of 2 decades of research. *Psychotherapy: Theory, Research, Practice, Training*, 39(4), 354 – 367. <https://doi.org/10.1037/0033-3204.39.4.354>
- Fritz, R. M., Tempel, A. B., Sigel, B. A., Conners-Burrow, N. A., Worley, K. B., & Kramer, T. L. (2013). Improving the dissemination of evidence-based treatments: Facilitators and barriers to participating in case consultation. *Professional Psychology: Research and Practice*, 44(4), 225–230.
- Funderburk, B., Chaffin, M., Bard, E., Shanley, J., Bard, D., & Berliner, L. (2015). Comparing client outcomes for two evidence-based treatment consultation strategies. *Journal of Clinical Child and Adolescent Psychology*, 44(5), 730 – 741.
<https://doi.org/10.1080/15374416.2014.910790>
- Gabbay, M. B., Kiemle, G., & Maguire, C. (1999). Clinical supervision for clinical psychologists: Existing provision and unmet needs. *Clinical Psychology and Psychotherapy*, 6, 404–412.
- Galovski, T. E., Blain, L. M., Mott, J. M., Elwood, L., & Houle, T. (2012). Manualized therapy for PTSD: Flexing the structure of cognitive processing therapy. *Journal of Consulting and Clinical Psychology*, 80(6), 968–981. <https://doi.org/10.1037/a0030600>

- Garland, A., & Schoenwald, S. K. (2013). Use of the effective and efficient quality control methods to implement psychosocial interventions. *Clinical Psychology: Science and Practice*, 20, 33–43.
- Garner, B. R., Godley, S. H., Dennis, M. L., Hunter, B. D., Bair, C. M. & Godley, M. D. (2012). Using pay for performance to improve treatment implementation for adolescent substance use disorders: Results from a cluster randomized trial. *Archives of Pediatrics & Adolescent Medicine*, 166(10), 938–944. <https://doi.org/10.1001/archpediatrics.2012.802>
- Garner, B. R., Godley, S. H., Funk, R. R., Dennis, M. L., Smith, J. E., & Godley, M. D. (2009). Exposure to adolescent community reinforcement approach treatment procedures as a mediator of the relationship between adolescent substance use treatment retention and outcome. *Journal of Substance Abuse Treatment*, 36(3), 252–264. <https://doi.org/10.1016/j.jsat.2008.06.007>
- Gaston, L., Piper, W. E., Debbane, E. G., Bienvenu, J. P., & Garant, J. (1994). Alliance and technique for predicting outcome in short and long term analytic psychotherapy. *Psychotherapy Research*, 4, 121–135.
- Gaston, L., & Ring, J. M. (1992). Preliminary results on the Inventory of Therapeutic Strategies (ITS). *Journal of Psychotherapy Research and Practice*, 1, 1–13.
- Gaston, L., Thompson, L., Gallagher, D., Cournoyer, L., & Gagnon, R. (1998). Alliance, technique, and their interaction in predicting outcome of behavioral, cognitive, and brief dynamic therapy. *Psychotherapy Research*, 8, 190–209.
- Gibson, J. A., Grey, I. M., & Hastings, R. P. (2009). Supervisor support as a predictor of burnout and therapeutic self-efficacy in therapists working in ABA schools. *Journal of Autism and Developmental Disorders*, 39(7), 1024–1030. <https://doi.org/10.1007/s10803-009-0709-4>
- Gillespie, M. L., Huey, S. J., & Cunningham, P. B. (2017). Predictive validity of an observer-rated adherence protocol for multisystemic therapy with juvenile drug offenders. *Journal of Substance Abuse Treatment*, 76, 1–10. <https://doi.org/10.1016/j.jsat.2017.01.001>

- Gillham, J. E., Hamilton, J., Freres, D. R., Patton, K., & Gallop, R. (2006). Preventing depression among early adolescents in the primary care setting: A randomized controlled study of the Peen Resiliency Program. *Journal of Abnormal Child Psychology*, 34(2), 203–219. <https://doi.org/10.1007/s10802-005-9014-7>
- Gingiss, P. M., Roberts-Gray, C., & Boerm, M. (2006). Bridge-It: A system for predicting implementation fidelity for school-based tobacco prevention programs. *Prevention Science*, 7(2), 197–207.
- Ginsburg, G. S., Becker, K. D., Drazdowski, T. K., & Tein, J. Y. (2012). Treating anxiety disorders in inner city schools: Results from a pilot randomized controlled trial comparing CBT and usual care. *Child Youth Care Forum*, 41, 1–19. <https://doi.org/10.1007/s10566-011-9156-4>
- Gleacher, A. A., Nadeem, E., Moy, A. J., Whited, A. L., Albano, A. M., Radigan, M., Wang, R., Chassman, J., Myrhol-Clarke, B., & Hoagwood, K. E. (2011). Statewide CBT training for clinicians and supervisors treating youth: The New York State Evidence-Based Treatment Dissemination Center. *Journal of Emotional and Behavioral Disorders*, 19(3), 182–192.
- Glisson, C., & Hemmelgarn, A. (1998). The effects of organizational climate and interorganizational coordination on the quality and outcomes of children's service systems. *Child Abuse & Neglect*, 22(5), 401–421.
- Goense, P. B., Assink, M., Starns, G. J., Boendermaker, L., & Hoeve, M. (2016). Making 'what works' work: A meta-analytic study of the effect of treatment integrity on outcomes of evidence-based interventions for juveniles with antisocial behavior. *Aggression and Violent Behavior*, 31, 106–115. <https://doi.org/10.1016/j.avb.2016.08.003>
- Goldbeck, L., Muche, R., Sachser, C., Tutus, D., & Rosner, R. (2016). Effectiveness of Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) for children and adolescents: A

- randomized controlled trial in eight German mental health clinics. *Psychotherapy and Psychosomatics*, 85(3), 159–170.
- Gómez, J. M. (2020). Trainee perspectives on relational cultural therapy and cultural competency in supervision of trauma cases. *Journal of Psychotherapy Integration*, 30(1), 60–66. <http://dx.doi.org/10.1037/int0000154>
- Gonsalvez, C. J., & Calvert, F. L. (2014). Competency-based models of supervision: Principles and applications, promises and challenges. *Australian Psychologist*, 49(4), 200–208. <https://doi.org/10.1111/ap.12055>
- Gonsalvez, C. J., Wahnnon, T., & Deane, F. P. (2016). Goal-setting, feedback, and assessment practices reported by Australian clinical supervisors. *Australian Psychologist*, 52, 21–30. <https://doi.org/10.1111/ap.12175>
- Graham, C., Carr, A., Rooney, B., Sexton, T., Satterfield, W., & Rachel, L. (2014). Evaluation of Functional Family Therapy in an Irish context. *Journal of Family Therapy*, 36(1), 20–38. <https://doi.org/10.1111/1467-6427.12028>
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, 60, 549–576.
- Gray, L. A., Ladany, N., Walker, J. A., & Ancis, J. R. (2001). Psychotherapy trainees' experience of counterproductive events in supervision. *Journal of Counseling Psychology*, 48(4), 371–383. <https://doi.org/10.1037/0022-0167.48.4.371>
- Green, A. E., Albanese, B. J., Shapiro, N. M., & Aarons, G. A. (2014). The roles of individual and organizational factors in burnout among community-based mental health service providers. *Psychological Services*, 11(1), 41–49. <https://doi.org/10.1037/a0035299>
- Greer, D., Grasso, D. J., Cohen, A., & Webb, C. (2013). Trauma-focused treatment in a state system of care: Is it worth the cost? *Administration and Policy in Mental Health and Mental Health Services Research*, 41(3), 317–323. <https://doi.org/10.1007/s10488-013-0468-6>

- Grencavage, L. M., & Norcorss, J. C. (1990). Where are the commonalities among the therapeutic common factors? *Professional Psychology: Research and Practice*, 21, 372–378.
- Gustafson, D. H., Quanbeck, A. R., Robinson, J. M., James, M., James, H., Pulvermacher, A., French, M. T., McConnell, J. K., Batalden, P. B., Hoffman, K. A., & McCarty, D. (2013). Which elements of improvement collaborative are most effective? A cluster-randomized trial. *Addiction*, 108, 1145–1157.
- Hadjistavropoulos, H., Kehler, M., & Hadjistavropoulos, T. (2010). Training graduate students to be clinical supervisors: A survey of Canadian professional psychology programmes. *Canadian Psychology/Psychologie Canadienne*, 51(3), 206–212.
<https://doi.org/10.1037/a0020197>
- Haine-Schlagel, R., Brookman-Frazee, L., Janis, B., & Gordon, J. (2013). Evaluating a learning collaborative to implement evidence-informed engagement strategies in community-based services for young children. *Child & Youth Care Forum*, 42(5), 457–473.
<https://doi.org/10.1007/s10566-013-9210-5>
- Hall, I. E. (2007). *Therapist adherence and technical skills in two versions of emotion-focused trauma therapy*. Unpublished doctoral dissertation. University of Windsor.
- Hanson, R. F., Gros, K. S., Davidson, T. M., Barr, S., Cohen, J., Deblinger, E., Mannarino, A. P., & Ruggiero, K. J. (2014). National trainers' perspectives on challenges to implementation of an empirically-supported mental health treatment. *Administration and Policy in Mental Health and Mental Health Services Research*, 41(4), 522–534.
- Hanson, R. F., & Jobe-Shields, L. (2017). Trauma-focused cognitive behavioral therapy for children and adolescents. In S. N., Gold (Ed.), *APA handbook of trauma psychology: Trauma practice* (Vol. 2, pp. 389–410). American Psychological Association.
- Hanson, R. F., Ralston, E., Moreland, A. D., Peer, S. O., & Fitzgerald, M. M. (2019). Statewide implementation of child trauma-focused practices using the Community-Based Learning

- Collaborative model. *American Psychological Association*, 16(1), 170–181.
<http://dx.doi.org/10.1037/ser0000319>
- Hanson, R. F., Saunders, B. E., Peer, S. O., Ralston, E., Moreland, A. D., Schoenwald, S., & Chapman, J. (2018). Community-based learning collaboratives and participant reports of interprofessional collaboration, barriers to, and utilization of child trauma services. *Children and Youth Services Review*, 94, 304–314.
- Hanson, R. F., Chapman, J. E., Schoenwald, S. K., & de Arellano, M. (2016). Fidelity study of Children's Institute, Inc.'s delivery of Trauma-Focused Cognitive Behavioral Therapy. *MDRC*.
- Hanson, R. F., Schoenwald, S., Saunders, B. E., Chapman, J., Palinkas, L. A., Moreland, A. D., & Dopp, A. (2016). Testing the Community-Based Learning Collaborative (CBLC) implementation model: A study protocol. *International Journal of Mental Health Systems*, 10(52). <https://doi.org/10.1186/s13033-016-0084-4>
- Harper, F. G., Melton, B., & Campbell, B. (2012). Relational proficiencies in counseling supervision: The “5 things” in practice. *The Graduate Research Journal*, 4, 2–20.
- Hartnett, D., Carr, A., & Sexton, T. (2016). The effectiveness of Functional Family Therapy in reducing adolescent mental health risk and family adjustment difficulties in an Irish context. *Family Process*, 55, 287–304. <https://doi.org/10.1111/famp.12195>
- Hatcher, R. L., Fouad, N. A., Campbell, L. F., McCutcheon, S. R., Grus, C., & Leahy, K. L. (2013). Competency-based education for professional psychology: Moving from concept to practice. *Training and Education in Professional Psychology*, 7(4), 225–234.
<https://doi.org/10.1037/a0033765>
- Haug, T., Nordgreen, T., Öst, L., Tangen, T., Kvale, G., Hovland, O. J., Heiervang, E. R., & Havik, O. E. (2016). Working alliance and competence as predictors of outcome in cognitive behavioral therapy for social anxiety and panic disorder in adults. *Behaviour Research and Therapy*, 77, 40–51. <https://doi.org/10.1016/j.brat.2015.12.004>

Havens, J. F., Gudiño, O. G., Biggs, E. A., Diamond, U. N., Weis, J. R., & Cloitre, M. (2012).

Identification of trauma exposure and PTSD in adolescent psychiatric inpatients: An exploratory study. *Journal of Traumatic Stress, 25*(2), 171–178.

<https://doi.org/10.1002/jts.21683>

Helseth, S. A., Peer, S. O., Are, F., Korell, A. M., Saunders, B. E., Schoenwald, S. K.,

Chapman, J. E., & Hanson, R. F. (2020). Sustainment of trauma-focused and evidence-based practices following learning collaborative implementation. *Administration and Policy in Mental Health and Mental Health Services Research*.

<https://doi.org/10.1007/s10488-020-01024-3>

Henggeler, S. (2011). Efficacy studies to large-scale transport: The development and validation of Multisystemic Therapy programs. *Annual Review of Clinical Psychology, 7*, 351–381.

Henggeler, S. W., Liao, J. G., Letourneau, E. J., & Edwards, D. L. (2002). Transporting efficacious treatments to field settings: The link between supervisory practices and therapist fidelity in MST programs. *Journal of Clinical Child Psychology, 31*(2), 155–167.

Henggeler, S. W., Melton, G. B., Brondino, M. J., Scherer, D. G., & Hanley, J. H. (1997).

Multisystemic Therapy with violent and chronic juvenile offenders and their families: The role of treatment fidelity in successful dissemination. *Journal of Consulting and Clinical Psychology, 65*, 821–833. <https://doi.org/10.1037/0022-006X.65.5.821>

Henggler, S. W., Prickrel, S. G., & Brondino, M. J. (1999). Multisystemic treatment of substance-abusing and dependent delinquents: Outcomes, treatment fidelity, and transportability. *Mental Health Services Research, 1*, 171–184.

Henggeler, S. W., & Sheidow, A. J. (2012). Empirically supported family-based treatment for conduct disorder and delinquency in adolescents. *Journal of Marital and Family Therapy, 38*, 30–58.

- Hernandez, P., & McDowell, T. (2010). Intersectionality, power, and relational safety in context. Key concepts in clinical supervision. *Training and Education in Professional Psychology*, 4, 29–35. <https://doi.org/10.1037/a0017064>
- Herschell, A. D., Kolko, D. J., Baumann, B. L., & David, A. C. (2010). The role of therapist training in the implementation of psychosocial treatments: A review and critique with recommendations. *Clinical Psychology Review*, 30(4), 448–466.
- Heywood, C., & Fergusson, D. (2016). A pilot study of Functional Family Therapy in New Zealand. *New Zealand Journal of Psychology*, 45, 12–22.
- Higa-McMillan, C. K., Francis, S. E., Rith-Najarian, L., & Chorpita, B. F. (2016). Evidence base update: 50 years of research on treatment for child and adolescent anxiety. *Journal of Clinical Child and Adolescent Psychology*, 45(2), 91–113. <https://doi.org/10.1080/15374416.2015.1046177>
- Hill, C. E., & Knox, S. (2002). Self-disclosure. In J. C. Norcross (Ed.), *Psychotherapy relationships that work* (pp. 255–265). Oxford.
- Hill, V., Bond, C., Atkinson, C., Woods, K., Gibbs, S., Howe, J., & Morris, S. (2015). Developing as a practitioner: How supervision supports the learning and development of trainee educational psychologists in three-year doctoral training. *Educational and Child Psychology*, 32(3), 119–131.
- Himle, D. P., Jayaratne, S., & Thyness, P. A. (1989). The buffering effects of four types of supervisory support on work stress. *Administration in Social Work*, 13, 19–34. https://doi.org/10.1300/J147v13n01_02
- Hoaglin, D. C., & Iglewicz, B. (1987). Fine-tuning some resistant rules for outlier labeling. *Journal of the American Statistical Association*, 82(400), 1147–1149. <https://doi.org/10.1080/01621459.1987.10478551>

- Hoaglin, D. C., Iglewicz, B., & Tukey, J. W. (1986). Performance of some resistant rules for outlier labeling. *Journal of the American Statistical Association*, 81(396), 991–999.
<https://doi.org/10.1080/01621459.1986.10478363>
- Hoffman, K. A., Ford, J. H. II, Choi, D., Gustafson, D. H., & McCarty, D. (2008). Replication and sustainability of improved access and retention within the Network for the Improvement of Addiction Treatment. *Drug and Alcohol Dependence*, 98, 63–69.
- Hoge, M. A., Migdole, S., Farkas, M. S., Ponce, A. N., & Hunnicutt, C. (2011). Supervision in public sector behavioral health: A review. *The Clinical Supervisor*, 30(2), 183 – 203.
<https://doi.org/10.1080/07325333.2011.604276>
- Hoge, M. A., Morris, J. A., Stuart, G. W., Huey, L. Y., Bergeson, S., Flaherty, M. T., Morgan, O., Peterson, J., Daniels, A. S., Paris, M., & Madenwald, K. (2009). A national action plan for workforce development in behavioral health. *Psychiatric Services*, 60, 883–887.
- Hogue, A., Henderson, C. E., Dauber, S., Barajas, P. C., Fried, A., & Liddle, H. A. (2008). Treatment adherence, competence, and outcome in individual and family therapy for adolescent behavior problems. *Journal of Consulting and Clinical Psychology*, 76(4), 544–555. <https://doi.org/10.1037/0022-006X.76.4.544>
- Holth, P., Torsheim, T., Sheidow, A., Ogden, T., & Henggeler, S. W. (2011). Intensive quality assurance of therapist adherence to behavioral interventions for adolescent substance use problems. *Journal of Child & Adolescent Substance Abuse*, 20(4), 289–313.
<https://doi.org/10.1080/1067828X.2011.581974>
- Horn, S. D., & Gassaway, J. (2007). Practice-based evidence study design for comparative effectiveness research. *Medical Care*, 45(10), S50–S57.
<https://doi.org/10.1097/MLR.0b013e318070c07b>
- Horowitz, M. J., Marmar, C. R., Weiss, D. S., DeWin, K. N., & Rosenbaum, R. (1984). Brief psychotherapy of bereavement reactions: The relationship of process to outcome. *Archives of General Psychiatry*, 41, 43–48.

- Howse, R. B., Calkins, S. D., Anastopoulos, A. D., Keane, S. P., & Shelton, T. L. (2003). Regulatory contributors to children's kindergarten achievement. *Early Education and Development, 14*, 101–119.
- Hox, J. J. (2010). *Multilevel analysis: Techniques and applications* (2nd ed.) Routledge.
- Huaging, Q. C., & Kaiser, A. P. (2003). Behavior problems of preschool children from low-income families: Review of literature. *Topics in Early Childhood Special Education, 23*, 188–216.
- Hukkelberg, S. S., & Ogden, T. (2013). Working alliance and treatment fidelity as predictors of externalizing problem behaviors in parent management training. *Journal of Consulting and Clinical Psychology, 81*, 1010–1020. <https://doi.org/10.1037/a0033825>
- Huppert, J. D., Barlow, D. H., Gorman, J. M., Shear, M. K., & Woods, S. W. (2006). The interaction of motivation and therapist adherence predict outcome in cognitive behavioral therapy for panic disorder: Preliminary findings. *Cognitive and Behavioural Practice, 13*, 198–204.
- Hurlburt, M. S., Leslie, L. K., Landsverk, J., Barth, R. P., Burns, B. J., Gibbons, R. D., Slymen, D. J., & Zhang, J. (2004). Contextual predictors of mental health service use among children open to child welfare. *Archives of General Psychiatry, 61*(12), 1217–1224.
- Inman, A. G., Hutman, H., Pendse, A., Devdas, L., Luu, L., & Ellis, M. V. (2014). Current trends concerning supervisors, supervisees, and clients in clinical supervision. In E. C. Watkins & D. L. Milne (Eds.), *The Wiley international handbook of clinical supervision* (pp. 61–102). Wiley-Blackwell. <https://doi.org/10.1002/9781118846360.ch4>
- Institute for Healthcare Improvement (IHI). (2017). <https://www.ihl.org/resources/Pages/Tools?PlanDoStudyActWorksheet.aspx>
- Institute for Healthcare Improvement (IHI). (2003). *The breakthrough series: IHI's collaborative model for achieving breakthrough improvement. IHI innovation series white paper.* Available on www.IHI.org

Institute for Healthcare Improvement (IHI). (2004). The breakthrough series: IHI's collaborative model for achieving breakthrough improvement. *Diabetes Spectrum*, 17, 97–101.

<http://dx.doi.org/10.2337/diaspect.17.2.97>

International Association of Applied Psychology (IAAP) and International Union of Psychological Science (IUPsyS). (2016). *International Declaration of Core Competencies in Professional Psychology*. <http://www.iupsys.net/dotAsset/1fd6486e-b3d5-4185-97d0-71f512c42c8f.pdf>

Jakob, M., Weck, F., & Bohus, M. (2013). Live supervision: From the one-way mirror to video-based online supervision. *Verhaltenstherapie*, 23, 170–180.

Jaycox, L. H., Cohen, J. A., Mannarino, A. P., Langley, A., Walker, D. W., Geggheimer, K., Scott, M., & Schonlau, K. L. (2010). Children's mental health care following Hurricane Katrina: A field trial of trauma psychotherapies. *Journal of Traumatic Stress*, 23, 223–231.

Jensen-Doss, A., Smith, A. M., Walsh, L. M., Ringle, V. M., Casline, E., Patel, Z., Shaw, A. M., Maxwell, C., Hanson, R., & Webster, R. (2020). Preaching to the choir? Predictors of engagement in a community-based learning collaborative. *Administration and Policy in Mental Health and Mental Health Services Research*, 47, 279–290.

<https://doi.org/10.1007/s10488-019-00985-4>

Jensen, T. K., Holt, T., Morup, O. S., Fjermestad, K. W., & Wentzel-Larsen, T. (2018). Change in post-traumatic cognitions mediates treatment effects for traumatized youth – A randomized controlled trial. *Journal of Counseling Psychology*, 65(2), 166–177.

<https://doi.org/10.1037/cou0000258>

Jensen, T. K., Holt, T., Ormhaug, S. M., Egeland, K., Granly, L., Hoaas, L. C., Hukkelberg, S. S., Indregard, T., Stormyren, S. D., & Wentzel-Larsen, T. (2014). A randomized effectiveness study comparing Trauma-Focused Cognitive Behavioral Therapy with

- therapy as usual for youth. *Journal of Clinical Child and Adolescent Psychology*, 43(3), 356–369.
- Kaehler, L. A., Jacobs, M., & Jones, D. J. (2016). Distilling common history and practice elements to inform dissemination: Hanf-model BPT programs as an example. *Clinical Child and Family Psychology Review*, 19(3), 236–258. <https://doi.org/10.1007/s10567-016-0210-5>
- Kameoka, S., Yagi, J., Arai, Y., Nosaka, S., Miyake, W., Takada, S., et al. (2015). Feasibility of Trauma-Focused Cognitive Behavioral Therapy for traumatized children in Japan: A pilot study. *International Journal of Mental Health Systems*, 9, 26.
- Kaplow, J. B., & Windom, C. S. (2007). Age of onset of child maltreatment predicts long-term mental health outcomes. *Journal of Abnormal Psychology*, 116, 176–187.
- Karnieli-Miller, O., Vu, R., T., Holtman, M. C., Clyman, S. G., & Inui, T. S. (2010). Medical students' professionalism narratives: A window on the informal and hidden curriculum. *Academic Medicine*, 85(1), 124–133. <https://doi.org/10.1097/ACM.0b013e3181c42896>
- Kaslow, N. J. (2004). Competencies in professional psychology. *American Psychologist*, 59(8), 774–781. <https://doi.org/10.1037/0003-066X.59.8.774>
- Kaslow, N. J., Rubin, N., Bebeau, M., Leigh, I., Lichtenberg, J., Nelson, P., & Smith, L. (2007). Guiding principles and recommendations for the assessment of competence. *Professional Psychology: Research and Practice*, 38, 441–451. [10.1037/0735-7028.38.5.441](https://doi.org/10.1037/0735-7028.38.5.441)
- Katzelnick, D. J., von Korff, M., Chung, H., Provost, L. P., & Wagner, E. H. (2005). Applying depression-specific change concepts in a collaborative breakthrough series. *Joint Commission Journal on Quality and Patient Safety*, 31, 386–397.
- Kavanagh, D. J., Spence, S., Sturk, H., Strong, J., Wilson, J., Worrall, L., Crow, N., & Skerrett, R. (2008). Outcomes of training in supervision: Randomised controlled trial. *Australian Psychologist*, 43(2), 96 – 104. <https://doi.org/10.1080/00050060802056534>

- Kazantzis, N., Deane, F. P., & Ronan, K. R. (2000). Homework assignments in Cognitive Behavioral Therapy: A meta-analysis. *Clinical Psychology Science and Practice*, 7(2), 189–202. <https://doi.org/10.1093/clipsy.7.2.189>
- Kazantzis, N., Whittington, C., & Dattilio, F. (2010). Meta-analysis of homework effects in cognitive and behavioral therapy: A replication and extension. *Clinical Psychology: Science and Practice*, 17(2), 144–156. <https://doi.org/10.1111/j.1468-2850.2010.01204.x>
- Kendall, P. C., & Beidas, R. S. (2007). Smoothing the trail for dissemination of evidence-based practices for youth: Flexibility within fidelity. *Professional Psychology: Research and Practice*, 38(1), 13–20. <https://doi.org/10.1037/0735-7028.38.1.13>
- Kennedy, M. G., Mizuno, Y., Hoffman, R., Baume, C., & Strand, J. The effect of tailoring a model HIV prevention program for local adolescent target audiences. *AIDS Education and Prevention*, 12(3), 225–238.
- Kilminster, S. M., & Jolly, B. C. (2000). Effective supervision in clinical practice settings: A literature review. *Medical Education*, 34, 827–840.
- Kilpatrick, D. G., Ruggiero, K. J., Acierno, R., Saunders, B. E., Resnick, H. S., & Best, C. L. (2003). Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: Results from the National Survey of Adolescents. *Journal of Consulting and Clinical Psychology*, 71, 692–700.
- King, N. J., Tonge, B. J., Mullen, P., Myerson, N., Heyne, D., Rollings, S., Martin, R., & Ollendick, T. H. (2000). Treating sexually abused children with posttraumatic stress symptoms: A randomized clinical trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 1347–1355.
- Kirsch, V., Ferdinand, K., Tuts, D., & Goldbeck, L. (2018). Treatment expectancy, working alliance, and outcome of Trauma-Focused Cognitive Behavioral Therapy with children and adolescents. *Child and Adolescent Psychiatry and Mental Health*, 12. <https://doi.org/10.1186/s13034-018-0223-6>

- Kisiel, C., Febrenbach, T., Small, L., & Lyons, J.S. (2009). Assessment of complex trauma exposure, responses, and service needs among children and adolescents in child welfare. *Journal of Child & Adolescent Trauma*, 2, 143–160.
- Kitchiner, N. J., Phillips, B., Roberts, N., & Bisson, J. I. (2006). Increasing access to Trauma-Focused Cognitive Behavioural Therapy for post-traumatic stress disorder through a pilot feasibility study of a group clinical supervision model. *Behavioural and Cognitive Psychotherapy*, 35, 251–254. <https://doi.org/10.1027/S1352465806003201>
- Kivlighan, D. M., Angelone, E. O., & Swafford, K. G. (1991). Live supervision in individual psychotherapy: Effects on therapist's intention use and client's evaluation of session effect and working alliance. *Professional Psychology: Research and Practice*, 22(6), 489 – 495. <https://doi.org/10.1037/0735-7028.22.6.489>
- Klitzke, M. J., & Lombardo, T. W. (1991). A 'bug-in-the-eye' can be better than a 'bug-in-the-ear': A teleprompter technique for on-line therapy skills training. *Behavior Modification*, 15(1), 113 – 117. <https://doi.org/10.1177/01454455910151007>
- Kolko, D. J., Cohen, J. A., Mannarino, A. P., Baumann, B. L., & Knudsen, K. (2009). Community treatment of child sexual abuse: A survey of practitioners in the National Child Traumatic Stress Network. *Administration and Policy in Mental Health and Mental Health Services Research*, 36, 37–49.
- Kolko, D. J., Iselin, A. R., & Gully, K. J. (2011). Evaluation of the sustainability and clinical outcome of Alternatives for Families: A Cognitive-Behavioral Therapy (AF-CBT) in a child protection center. *Child Abuse & Neglect*, 35(2), 105–116.
- Konanur, S., Muller, R. T., Cinamon, J. S., Thornback, K., & Zorzella, K. P. M. (2015). Effectiveness of Trauma-Focused Cognitive Behavioral Therapy in a community-based program. *Child Abuse and Neglect*, 50, 159–170. <https://doi.org/10.1016/j.chiabu.2015.07.013>

- Kumpfer, K., Pinyuchon, M., deMelo, A. T., & Whiteside, H. O. (2008). Cultural adaptation process for international dissemination of the Strengthening Families Program. *Evaluation and the Health Professions*, 31(2), 226–239.
- Ladany, N., Friedlander, M. L. (1995). The relationship between the supervisory working alliance and trainees' experience of role conflict and role ambiguity. *Counselor Education and Supervision*, 34(3), 220–231. <https://doi.org/10.1002/j.1556-6978.1995.tb00244.x>
- Ladany, N., Inman, A. G., Hill, C. E., Knox, S., Crook-Lyon, R. E., Thompson, B. J., Burkard, A. W., Hess, S. A., Williams, E. N., & Walker, J. A. (2012). Corrective relational experiences in supervision. In L. G. Castonguay & C. E. Hill (Eds.), *Transformation in psychotherapy: Corrective experiences across cognitive behavioral, humanistic, and psychodynamic approaches* (pp. 335–352). American Psychological Association. <https://doi.org/10.1037/13747-016>
- Ladany, N., & Inman, A. G. (2012). Training and supervision. In E. M. Altmaier & C. J. I., Hansen (Eds.), *The Oxford handbook of counseling psychology* (pp. 179–207). Oxford University Press.
- Ladany, N., Mori, Y., & Mehr, K. W. (2013). Effective and ineffective supervision. *The Counseling Psychologist*, 41, 28–47. 10.1177/001000012442648
- Lambert, M. J., & Arnold, R. C. (1987). Research and the supervisory process. *Professional Psychology: Research and Practice*, 18(3), 217–224. <https://doi.org/10.1037/0735-7028.18.3.217>
- Lambert, M. J., & Shimokawa, K. (2011). Collecting client feedback. *Psychotherapy*, 48(1), 72 – 79. <https://doi.org/10.1037/a0022238>
- Lange, A., Rijken, R., Busschbach, J., Delsing, M., & Scholte, R. (2017). It's not just the therapist: Therapist and country-wide experience predict therapist adherence and

- adolescent outcome. *Child & Youth Care Forum*, 46(4), 455–471.
<https://doi.org/10.1007/s10566-016-9388-4>
- Lang, J. M., Campbell, K., Shanley, P., Crusto, C. A., & Connell, C. M. (2016). Building capacity for trauma-informed care in the child welfare system: Initial results of a statewide implementation. *Child Maltreatment*, 21(2), 113–124.
<https://doi.org/10.1177/1077559516635273>
- Lang, J. M., & Connell, C. M. (2016). Measuring costs to community-based agencies for implementation of an evidence-based practice. *Journal of Behavioral Health Services & Research*, 1–13. <https://doi.org/10.1007/s11414-016-9541-8>
- Lang, J. M., Franks, R. P., Epstein, C., Stover, C., & Oliver, J. A. (2015). Statewide dissemination of an evidence-based practice using breakthrough series collaboratives. *Children and Youth Services Review*, 55, 201–209.
<http://dx.doi.org/10.1016/j.childyouth.2015.06.0050190-7409/>
- Lang, J. M., Randall, K. G., Delaney, M., & Vanderploeg, J. L. (2017). A model for sustaining evidence-based practices in a statewide system. *Families in Society: The Journal of Contemporary Social Services*, 98(1), 18–26. <https://doi.org/10.1606/1044-3894.2017.5>
- Leenarts, L. E. W., Diehle, J., Doreleijers, T. A. H., Jansma, E. P., & Lindauer, R. J. L. (2013). Evidence-based treatments for children with trauma-related psychopathology as a result of childhood maltreatment: A systematic review. *European Child & Adolescent Psychiatry*, 22(5), 269–283. <https://doi.org/10.1007/s00787-012-0367-5>
- Lee, S., Aos, S., & Pennucci, A. (2015). *What works and what does not? Benefit-cost findings from WSIPP* (Doc. No. 15-02-4101). Washington State Institute for Public Policy.
- Lehrman-Waterman, D., & Ladany, N. (2001). Development and validation of the evaluation process within supervision history. *Journal of Counseling Psychology*, 48(2), 168–177.
<https://doi.org/10.1037/0022-0167.48.2.168>

- Leijten, P., Dishion, T. J., Thomaes, S., Raaijmakers, M. A. J., Orobio de Castro, B., & Matthys, W. (2015). Brining parenting interventions back to the future: How randomized microtrials may benefit parenting intervention efficacy. *Clinical Psychology: Science and Practice*, 22(1), 47–57. <https://doi.org/10.1111/cpsp.12087>
- Lempp, H., & Seale, C. (2004). The hidden curriculum in undergraduate medical education: Qualitative study of medical students' perceptions of teaching. *BMJ: British Medical Journal*, 329(7469), 770–773. <https://doi.org/10.1136/bmj.329.7469.770>
- Lenz, S. A., & Hollenbaugh, M. K. (2015). Meta-analysis of Trauma-Focused Cognitive Behavioral Therapy for treating PTSD and cooccurring depression among children and adolescents. *Counseling Outcome Research and Evaluation*, 6(1), 18–32. <https://doi.org/10.1177/2150137815573790>
- Leslie, L. K., James, S., Monn, A., Kauten, M. C., Zhang, J., & Aarons, G. (2010). Health-risk behaviors in young adolescents in the child welfare system. *Journal of Adolescent Health*, 47, 26–34. <https://doi.org/10.1016/j.jadohealth.2009.12.032>
- Levitt, J. T., Malta, L. S., Martin, A., Davis, L., & Cloitre, M. (2007). The flexible application of a manualized treatment for PTSD symptoms and functional impairment related to the 9/11 World Trade Center attack. *Behaviour Research and Therapy*, 45(7), 1419–1433.
- Lewey, J. H., Smith, C. L., Burcham, B., Saunders, N. L., Elfallal, D., & O'Toole, S. K. (2018). Comparing the effectiveness of EMDR and TF-CBT for children and adolescents: A meta-analysis. *Journal of Child & Adolescent Trauma*, 11(4), 457–472. <https://doi.org/10.1007/s40653-018-0212-1>
- Liber, J. M., McLeod, B. D., Van Widenfelt, B. M., Goedhart, A. W., van der Leeden, A. J. M., Utens, E. M. W. J., & Treffers, P. D. A. (2010). Examining the relation between the therapeutic alliance, treatment adherence, and outcome of cognitive behavioral therapy for children with anxiety disorders. *Behavior Therapy*, 41(2), 172–186. <https://doi.org/10.1016/j.beth.2009.02.003>

- Lieberman, A. F., & van Horn, P. (2005). *Don't hit my mommy! A manual for Child-Parent Psychotherapy for young witnesses of family violence*. Zero TO Three Press.
- Liese, B., Barber, J., & Beck, A. T. (1995). *The Cognitive Therapy Adherence and Competence Scale*. Unpublished instrument, University of Kansas Medical Centre.
- Liese, B., & Beck, J. S. (1997). Cognitive therapy supervision. In C. E. Watkins (Ed.), *Handbook of psychotherapy supervision* (pp. 114–133). Wiley.
- Liness, S., Beale, S., Lea, S., Byrne, S., Hirsch, C. R., & Clark, D. M. (2019). The sustained effects of CBT training on therapist competence and patient outcomes. *Cognitive Therapy and Research*, 43, 631–641. <https://doi.org/10.1007/s10608-018-9987-5>
- Lin, T. H. (2010). A comparison of multiple imputation with EM algorithm and MCMC method for quality of life missing data. *Quality and Quantity: International Journal of Methodology*, 44, 277–287.
- Lippard, E. T. C., & Nemeroff, C. B. (2020). The devastating clinical consequences of child abuse and neglect: Increased disease vulnerability and poor treatment response in mood disorders. *American Journal of Psychiatry*, 177(1), 20–36. <https://doi.org/10.1176/appi.ajp.2019.19010020>
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83, 1198–1202. <https://doi.org/10.1080/01621459.1988.10478722>
- Litzelman, D. K., & Cottingham, A. H. (2007). The new formal competency-based curriculum and informal curriculum at Indiana University School of Medicine: Overview and five-year analysis. *Academic Medicine*, 82(4), 410–421. <https://doi.org/10.1097/ACM.0b013e31803327f3>
- Livni, D., Crowe, P., & Gonsalvez, C. J. (2012). Effects of supervision modality and intensity on alliance and outcomes for the supervisee. *Rehabilitation Psychology*, 57, 178–186. <https://doi.org/10.1037/a0027452>

- Loeb, K. L., Wilson, T. G., Labouvie, E., Pratt, E. M., Hayaki, J., Walsh, T. B., Agras, S. W., & Fairburn, C. G. (2005). Therapeutic alliance and treatment adherence in two interventions for bulimia nervosa: A study of process and outcome. *Journal of Consulting & Clinical Psychology, 73*(6), 1097–1107.
- Lofholm, C. A., Eichas, K., & Sundell, K. (2014). The Swedish implementation of Multisystemic Therapy for adolescents: Does treatment experience predict treatment adherence? *Journal of Clinical Child and Adolescent Psychology, 43*, 643–655.
<https://doi.org/10.1080/15374416.2014.883926>
- Luborsky, L., McLellan, A. T., Woody, G. E., O'Brien, C. P., & Auerbach, A. (1985). Therapist success and its determinants. *Archives of General Psychiatry, 42*, 602–661.
- Lucid, L., Meza, R., Pullmann, M. D., Jungbluth, N., Deblinger, E., & Dorsey, S. (2018). Supervision in community mental health: Understanding intensity of EBT focus. *Behavior Therapy, 49*, 481–493.
- Lund, E. M., Wilbur, R. C., & Kuemmel, A. M. (2020). Beyond legal obligation: The role and necessity of the supervisor-advocate in creating a socially just, disability-affirmative training environment. *Training and Education in Professional Psychology, 14*(2), 92–99.
<http://dx.doi.org/10.1037/tep0000277>
- Luther, L., Gearhart, T., Fukui, S., Morse, G., Rollins, A. L., & Salyers, M. P. (2017). Working overtime in community mental health: Associations with clinician burnout and perceived quality of care. *Psychiatric Rehabilitation Journal, 40*(2), 252 – 259.
<https://doi.org/10.1037/prj0000234>
- Lu, W., Yanos, P. T., Gottlieb, J. D., Duva, S. M., Silverstein, S. M., Xie, H., Rosenberg, S. D., & Mueser, K. T. Use of fidelity assessments to train clinicians in the CBT for PTSD program for clients with serious mental illness. *Psychiatric Services, 63*, 785–792.
<https://doi.org/10.1176/appi.ps.201000458>

- Lyons, J. S., Weiner, D. A., & Scheider, A. (2006). *A field trial of three evidence-based practices for trauma with children in state custody* (Report to the Illinois Department of Children and Family Services). Mental Health Resources Services and Policy Program, Northwestern University.
- Mannarino, A. P., Cohen, J. A., Deblinger, E., Runyon, M. K., & Steer, R. A. (2012). Trauma-Focused Cognitive-Behavioral Therapy for children: Sustained impact of treatment 6 and 12 months later. *Child Maltreatment, 17*, 231–241.
- Marek, L. I., Brock, D. J., & Sullivan, R. (2006). Cultural adaptations to a family life skills program: Implementation in rural Appalachia. *Journal of Primary Prevention, 27*(2), 113–133.
- Markiewicz, J., Ebert, L., Ling, D., Amaya-Jackson, L., & Kisiel, C. (2006). Learning collaborative toolkit. *National Center for Child Traumatic Stress*.
- Martin, J. R. (1976). What should we do with a hidden curriculum when we find one? *Curriculum Inquiry, 6*(2), 135–151. <https://doi.org/10.1080/03626784.1976.11075525>
- Marziali, E. A. (1984). Prediction of outcome of brief psychotherapy from therapist interpretive interventions. *Archives of General Psychiatry, 41*, 301–304.
- Mausbach, B., Moore, R., Roesch, S., Cardenas, V., & Patterson, T. L. (2010). The relationship between homework compliance and therapy outcomes: An updated meta-analysis. *Cognitive Therapy and Research, 34*(5), 429–438. <https://doi.org/10.1007/s10608-010-9297-z>
- McCambridge, J., Day, M., Thomas, B. A., & Strang, J. (2011). Fidelity to Motivational Interviewing and subsequent cannabis cessation among adolescents. *Addictive Behaviors, 36*, 749–754. <https://doi.org/10.1016/j.addbeh.2011.03.002>
- McCarty, D., Gustafson, D. H., Wisdom, J. P., Ford, J., Choi, D., Molfenter, T., Capoccia, V., & Cotter, F. (2007). The Network for the Improvement of Addiction Treatment (NIATx): Enhancing access and retention. *Drug and Alcohol Dependence, 88*, 138–145.

- McEwen, B. S. (2000). Effects of adverse experiences for brain structure and function. *Biological Psychiatry*, 48(8), 721–731. [https://doi.org/10.1016/S0006-3223\(00\)00964-1](https://doi.org/10.1016/S0006-3223(00)00964-1)
- McGaghie, W. C., Sajid, A. W., Miller, G. E., Telder, T. V., & Lipson, L. (1978). *Competency-based curriculum development in medical education*. World Health Organization.
- McHugh, K. R., Murray, H. W., & Barlow, D. H. (2009). Balancing fidelity and adaptation in the dissemination of empirically supported treatments: The promise of transdiagnostic interventions. *Behaviour Research and Therapy*, 47(11), 946–953. <https://doi.org/10.1016/j.brat.2009.07.005>
- McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2012). Childhood adversities and first onset of psychiatric disorders in a national sample of US adolescents. *JAMA Psychiatry*, 69(11), 1151–1160.
- McLaughlin, K. A., Koenen, K. C., Hill, E. D., Petukhova, M., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2013). Trauma exposure and posttraumatic stress disorder in a national sample of adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(8), 815–830. <https://doi.org/10.1016/j.jaac.2013.05.011>
- McLeod, B. D., Southam-Gerow, M. A., Jensen-Doss, A., Hogue, A., Kendall, P. C., & Weisz, J. R. (2019). Benchmarking treatment adherence and therapist competence in individual cognitive-behavioral treatment for youth anxiety disorders. *Journal of Clinical Child & Adolescent Psychology*, 48(S1), S234–S246. <https://doi.org/10.1080/15374416.2017.1381914>
- McLeod, B. D., Southam-Gerow, M. A., Rodriguez, A., Quinoy, A., Arnold, C., Kendall, P. C., & Weisz, J. R. (2016). Development and initial psychometrics for a therapist competence instrument for CBT for youth anxiety. *Journal of Clinical Child and Adolescent Psychology*, Advanced online publication

- McLeod, B. D., Southam-Gerow, M. A., Tully, C. B., Rodriguez, A., & Smith, M. M. (2013). Making a case for treatment integrity as a psychosocial treatment quality indicator for youth mental health care. *Clinical Psychology: Science and Practice*, 20, 14–32.
- McLeod, B. D., Southam-Gerow, M. A., & Weisz, J. R. (2009). Conceptual and methodological issues in treatment integrity measurement. *School Psychology Review*, 38(4), 541–546.
- McLeod, B. D., & Weisz, J. R. (2010) The therapy process observational coding system for child psychotherapy strategies scale. *Journal of Clinical Child and Adolescent Psychology*, 39(3), 436 – 443. <https://doi.org/10.1080/15374411003691750>
- McMullen, J., O’Callaghan, P., Shannon, C., Black, A., & Eakin, J. (2013). Group Trauma-Focused Cognitive Behavioural Therapy with former child soldiers and other war-affected boys in the DR Congo: A randomized controlled trial. *Journal of Child Psychology and Psychiatry*, 54, 1231–1241.
- Medical University of South Carolina. (2017). *TF-CBT Web 2.0 a Course for Trauma-Focused Cognitive Behavioral Therapy*. <https://tfcbt2.musc.edu/en>
- Meredith, L. S., Mendel, P., Pearson, M., Wu, S. Y., Joyce, G., Straus, J. B., Ryan, G., Keeler, E., & Unützer, J. (2006). Implementation and maintenance of quality improvement for treating depression in primary care. *Psychiatric Services*, 57, 48–55.
- Mihalic, S. (2004). The importance of implementation fidelity. *Emotional and Behavior Disorders in Youth*, 4(4), 83–105.
- Miller, W. R., Yahne, C. E., Moters, T. B., Martinez, J., Pirritano, M. (2004). A randomized trial of methods to help clinicians learn motivational interviewing. *Journal of Consulting and Clinical Psychology*, 72, 1050–1062.
- Milne, Baker, C., Blackburb, I., James, I., & Reichelt, K. (1999). Effectiveness of cognitive therapy training. *Journal of Behavior Therapy and Experimental Psychiatry*, 30, 81–92.
- Milne, D. L., & James, I. A. (2002). The observed impact of training on competence in clinical supervision. *British Journal of Clinical Psychology*, 41, 55–72.

- Milne, D. L., Sheikh, A. I., Pattison, S., & Wilkinson, A. (2011). Evidence-based training for clinical supervisors: A systematic review of 11 controlled studies. *The Clinical Supervisor, 30*, 53–71.
- Minonne, G. A. (2008). *Therapist adherence, patient alliance, and depression change in the NIMH Treatment for Depression Collaborative Research Program* [Doctoral dissertation, University of Michigan]. Available from ProQuest Dissertations and These database. (UMI No. 3328910)
- Mueser, K. T., Rosenberg, S. D., Xie, H., Jankowski, K. M., Bolton, E. E., Lu, W., Hamblen, J. L., Rosenberg, H. J., McHugo, G. J., & Wolfe, R. A. (2008). A randomized controlled trial of cognitive-behavioral treatment for posttraumatic stress disorder in severe mental illness. *Journal of Consulting and Clinical Psychology, 76*(2), 259–271.
<https://doi.org/10.1037/0022-006X.76.2.259>
- Murray, L. K., Cohen, J. A., & Mannarino A. P. (2013). Trauma-Focused Cognitive Behavioral Therapy for youth who experience continuous traumatic exposure. *Peace and Conflict: Journal of Peace Psychology, 19*, 180–195.
- Murray, L. K., Familiar, I., Skavenski, S., Jere, E., Cohen, J., Imasiku, M., Mayeya, J., Bass, J. K., & Bolton, P. (2013). An evaluation of trauma focused cognitive behavioral therapy for children in Zambia. *Child Abuse and Neglect, 37*, 1175–1185.
- Murray, L. K., Skavenski, S., Kane, J. C., Mayeya, J., Dorsey, S., Cohen, J. A., Michalopoulos, T., Imasiku, M., & Bolton, P. A. (2015). Effectiveness of Trauma-Focused Cognitive Behavioral Therapy among trauma-affected children in Lusaka, Zambia: A randomized controlled trial. *JAMA Pediatrics, 169*, 761–769.
<https://doi.org/10.1001/jamapediatrics.2015.0580>
- Nadeem, E., Gleacher, A., & Beidas, R. S. (2013). Consultation as an implementation strategy for evidence-based practices across multiple contexts: Unpacking the black box.

- Administration and Policy in Mental Health and Mental Health Services Research*, 40(6), 439–450. <https://doi.org/10.1007/s10488-013-0502-8>
- Nadeem, E., Olin, S. S., Hill, L. C., Hoagwood, K. E., & Horwitz, S. M. (2014). A literature review of learning collaboratives in mental health care: Used but untested. *Psychiatric Services*, 65(9), 1088–1099.
- Nadeem, E., Olin, S. S., Hill, L. C., Hoagwood, K. E., & Horwitz, S. M. (2013). Understanding the components of quality improvement collaboratives: A systematic literature review. *Milbank Quarterly*, 91(2), 354–394.
- Nadeem, E., Weiss, D., Olin, S. S., Hoagwood, K. E., & Horwitz, S. M. (2016). Using a theory-guided learning collaborative model to improve implementation of EBTs in a state children's mental health system: A pilot study. *Administration and Policy in Mental Health and Mental Health Services Research*, 43(6), 978–990. <https://doi.org/10.1007/s10488-016-0735-4>
- Nelson, C. A. III, Bos, K., Gunnar, M. R., & Sonuga-Barke, E. J. S. (2011). The neurobiological toll of early human deprivation. *Monographs of the Society for Research in Child Development*, 76, 127–146.
- Nelson, P. D. (2007). Striving for competence in the assessment of competence: Psychology's professional education and credentialing journey of public accountability. *Training and Education in Professional Psychology*, 1, 3–12. 10.1037/1931-3918.1.1.3
- New York State Education Department. (2017). *LCSW license requirements*. Retrieved from <http://www.op.nysed.gov>
- Nemeroff, C. B., Bremner, J. D., Foa, E. B., Mayberg, H. S., North, C. S., & Stein, M. B. (2006). Posttraumatic stress disorder: A state-of-the-science review. *Journal of Psychiatric Research*, 40, 1–21.

- Nock, M. K., Ferriter, C., & Holmberg, E. (2007). Parent beliefs about treatment credibility and effectiveness: Assessment and relation to subsequent treatment participation. *Journal of Child and Family Studies*, 16, 27–38.
- Norcross, J. C. (2002). *Psychotherapy relationships that work: Therapist contributions and responsiveness to patients*. Oxford University Press.
- Novins, D. K., Green, A. E., Legha, R. K., & Aarons, G. A. (2013). Dissemination and implementation of evidence-based practices for child and adolescent mental health: A systematic review. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(10), 1009–1025. <https://doi.org/10.1016/j.jaac.2013.07.012>
- O’Callaghan, P., McMullen, J., Shannon, C., Rafferty, H., & Black, A. (2013). A randomized controlled trial of Trauma-Focused Cognitive Behavioral Therapy for sexually exploited, war-affected Congolese girls. *Journal of the American Academy of Child and Adolescent Psychiatry*, 52, 359–369.
- O’Donnell, K., Dorsey, S., Gong, W., Ostermann, J., Whetten, R., Cohen, J.A., Itemba, D., Manongi, R., & Whetten, K. (2014). Treating maladaptive grief and posttraumatic stress symptoms in orphaned children in Tanzania: Group-based Trauma-Focused Cognitive Behavioral Therapy. *Journal of Traumatic Stress*, 27, 664–671.
- O’Donovan, A., Halford, K. W., & Walters, B. (2011). Towards best practice supervision of clinical psychology trainees. *Australian Psychologist*, 46(2), 101–112. <https://doi.org/10.1111/j.1742-9544.2011.00033.x>
- Ogrodniczuk, J. S. (1997). *Therapist adherence to treatment manuals and its relation to the therapeutic alliance and therapy outcome: Scale development and validation* [Doctoral dissertation, University of Alberta]. Available from Pro-Quest Dissertations and Theses database. (UMI No. NQ23049)

- Olatunji, B. O., Deacon, B. J., & Abramowitz, J. S. (2009). The cruelest cure? Ethical issues in the implementation of exposure-based treatments. *Cognitive and Behavioral Practice*, 16(2), 172–180.
- Olin, S. S., Chor, K. H. B., Weaver, J., Duan, N., Kerker, B. D., Clark, L. J., Cleek, A. F., Hoagwood, K. E., & Horwitz, S. M. (2015). Multilevel predictors of clinic adoption of state-supported trainings in children's services. *Psychiatric Services*, 66(5), 484–490.
- Olin, S. S., Nadeem, E., Gleacher, A., Weaver, J., Weiss, D., Hoagwood, K. E., & Horwitz, S. M. (2016). What predicts clinician dropout from state-sponsored managing and adapting practice training. *Administration and Policy in Mental and Mental Health Services Research*, 43(6), 945–956.
- Orengo-Aguayo, R. E., Hanson, R. F., Moreland, A. D., Jobe-Shields, L., & Adams, Z. W. (2018). Enhancing the delivery of an empirically-supported trauma-focused treatment for adolescents: Providers' views of the role of technology and web-based resources. *Administration and Policy in Mental Health and Mental Health Services Research*, 45(4), 575–586. <https://doi.org/10.1007/s10488-017-0846-6>
- Ormhaug, S. M., Jensen, T. K., Wentzel-Larsen, T., & Shirk, S. R. (2014). The therapeutic alliance in treatment of traumatized youth: Relation to outcome in a randomized clinical trial. *Journal of Consulting and Clinical Psychology*, 82, 52–64.
- Ovenstad, K. S., & Shirk, S. R. (2020). Therapists' behaviors and youths' therapeutic alliance during Trauma-Focused Cognitive Behavioral Therapy. *Consulting and Clinical Psychology*, 88(4), 350–361. <https://doi.org/10.1037/ccp0000465>
- Overbeek, M. M., de Schipper, J., Lamers-Winkelmann, F., & Schuengel, C. (2013). Effectiveness of specific factors in community-based intervention for child-witnesses of interparental violence: A randomized trial. *Child Abuse and Neglect*, 37, 1202–1214. <https://doi.org/10.1016/j.chiabu.2013.07.007>

- Pachana, N. A., Sofronoff, K., Scott, T., & Helmes, E. (2011). Attainment of competencies in clinical psychology training: Ways forward in the Australian context. *Australian Psychologist*, 46(2), 67–76. <https://doi.org/10.1111/j.1742-9544.2011.00029.x>
- Padesky, C. A. (1996). Developing cognitive therapist competency: Teaching and supervision models. In P. M. Salkovskis (Ed.), *Frontiers of cognitive therapy* (266 – 292). The Guilford Press.
- Paivio, S. C., Holowaty, K. A. M., & Hall, I. E. (2004). The influence of therapist adherence and competence on client reprocessing of child abuse memories. *Psychotherapy*, 41, 56–68.
- Palinkas, L. A., Fuentes, D., Finno, M., Garcia, A. R., Holloway, I. W., & Chamberlain, P. (2014). Inter-organizational collaboration in the implementation of evidence-based practices among public agencies serving abused and neglected youth. *Administration and Policy in Mental Health and Mental Health Services Research*, 41, 74–85.
<http://dx.doi.org/10.1007/s10488-012-0437-5>
- Paris, M., & Hoge, M. A. (2010). Burnout in the mental health workforce: A review. *The Journal of Behavioral Health Services & Research*, 37(4), 519–528.
<https://doi.org/10.1007/s11414-009-9202-2>
- Patallo, B. J. (2019). The multicultural guidelines in practice: Cultural humility in clinical training and supervision. *Training and Education in Professional Psychology*, 13(3), 227–232.
<http://dx.doi.org/10.1037/tep0000253>
- Patton, J., Muran, C., Safran, J. D., Wachtel, P., & Winston, A. (2009). *Measuring fidelity in three brief psychotherapies*. Unpublished manuscript.
- Patton, M. J., & Kivlighan, D. M. (1997). Relevance of the supervisory alliance to the counseling alliance and to treatment adherence in counselor training. *Journal of Counseling Psychology*, 44(1), 108–115. <https://doi.org/10.1037/002-0167.44.1.108>

- Pecora, P. J., Jensen, P. S., Romanelli, L. H., Jackson, L. J., & Ortiz, A. (2009). Mental health services for children placed in foster care: An overview of current challenges. *Child Welfare, 88*, 5–26.
- Pedhauzer, E. J. (1997). *Multiple regression in behavioral research* (3rd ed.). Harcourt Brace.
- Peer, S., Saunders, B., Korell, A., & Hanson, R. F. (2021). *Changes in child trauma assessment practices and related barriers during and after a Community-Based Learning Collaborative*. Manuscript under review.
- Pemberton, J. R., Connors-Burrow, N. A., Sigel, B. A., Sievers, C. M., Stokes, L. D., & Kramer, T. L. (2017). Factors associated with clinician participation in TF-CBT post-workshop training components. *Administration and Policy in Mental Health and Mental Health Services Research, 44*(4), 524–533.
- Perepletchikova, F., Hilt, L. M., Chereji, E., & Kazdin, A. E. (2009). Barriers to implementing treatment integrity procedures: Survey of treatment outcome researchers. *Journal of Consulting & Clinical Psychology, 77*, 212–218.
- Perepletchikova, F., & Kazdin, A. E. (2005). Treatment integrity and therapeutic change: Issues and research recommendations. *Clinical Psychology: Science and Practice, 12*(4), 365–383. <https://doi.org/10.1093/clipsy/bpi045>
- Perepletchikova, F., Treat, T. A., & Kazdin, A. E. (2007). Treatment integrity in psychotherapy research: Analysis of the studies and examination of the associated factors. *Journal of Consulting and Clinical Psychology, 75*(6), 829–841. <https://doi.org/10.1037/0022-006X.75.6.829>
- Perepletchikova, F. (2006). *Implementation of Treatment Integrity Procedures Scale: Rater manual*. Retrieved from <http://treatmentintegrity.com/HTMLDocs/itips.htm>
- Peris, T., Compton, S., Kendall, P. C., Birmaher, B., Sherill, J., March, J., & Piacentini, J. (2015). Trajectories of change in youth anxiety during cognitive-behavior therapy. *Journal of Consulting and Clinical Psychology, 83*, 239–252.

- Perry, B. D. (2001). The neurodevelopmental impact of violence in childhood. In D. Schetky & E.P. Bendeck (Eds.), *Textbook of child and adolescent forensic psychiatry* (pp. 221–238). American Psychiatric Press.
- Piper, W. E., Azim, H. F. A., Joyce, A. S., & McCallum, M. (1991). Transference interpretations, therapeutic alliance, and outcome in short-term individual psychotherapy. *Archives of General Psychiatry*, 48, 946–953.
- Piper, W. E., Debbane, E. G., Bienvenu, J. P., de Carufel, F., & Garant, J. (1986). Relationships between the object focus of therapist interpretations and outcome in short-term individual psychotherapy. *British Journal of Medical Psychology*, 59, 1–11.
- Podell, J. L. (2011). *Cognitive behavioral therapy for anxious youth: Therapist variables and child treatment outcome* [Doctoral dissertation, Temple University]. ProQuest Information & Learning.
- Podell, J. L., Kendall, P. C., Gosch, E. A., Compton, S. N., March, J. S., Albano, A. M., Rynn, M. A., Walkup, J. T., Sherrill, J. T., Ginsburg, G. S., Keeton, C. P., Birmaher, B. & Piacentini, J. C. (2013). Therapist factors and outcomes in CBT for anxiety in youth. *Professional Psychology: Research and Practice*, 44(2), 89–98.
<https://doi.org/10.1037/a0031700>
- Polak, R. A., Witteveen, A. B., Denys, D., & Olff, M. (2015). Breathing biofeedback as an adjunct to exposure in cognitive behavioral therapy hastens the reduction of PTSD symptoms: A pilot study. *Applied Psychophysiology and Biofeedback*, 40(1), 25–31.
<https://doi.org/10.1007/s10484-015-9268-y>
- Pollio, E., & Deblinger, E. (2017). Trauma-Focused Cognitive Behavioral Therapy for young children: Clinical considerations. *European Journal of Psychotraumatology*, 8(7).
<https://doi.org/10.1080/20008198.2018.1433929>

- Potter, D., Briggs, E. C., Keen, L., Amaya-Jackson, L., Mannarino, A., Cohen, J., et al. (2008). *North Carolina Child Treatment Program Fidelity & Competence Consultation Metric*. Unpublished instrument. Center for Child and Family Health.
- Powell, D. J., & Brodsky, A. (2004). *Clinical supervision in alcohol and drug abuse counseling: Principles, models, methods* (Rev. ed.). Jossey-Bass.
- Powell, B. J., McMillen, J. C., Proctor, E. K., Carpenter, C. R., Griffey, R. T., Bunger, A. C., Glass, J. E., & York, J. L. (2012). A compilation of strategies for implementing clinical innovations in health and mental health. *Medical Care Research and Review*, 69(2), 123–157.
- Proctor, E., Silmere, H., Raghaven, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R., & Hensley, M. (2011). Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda. *Administration and Policy in Mental Health and Mental Health Services Research*, 38(2), 65–76.
<https://doi.org/10.1007/s10488-010-0319-7>
- Pullman, M. D., Lucid, L., Harrison, J. P., Martin, P., Deblinger, E., Benjamin, K. S., & Dorsey, S. (2018). Implementation climate and time predict intensity of supervision content related to evidence-based treatment. *Frontiers in Public Health*, 6,
<https://doi.org/10.339/fpubh.2018.00280>
- Rakovshik, S. G., McManus, F., Vazquez-Montes, M., Muse, K., & Ougrin, D. (2016). Is supervision necessary? Examining the effects of internet-based CBT training with and without supervision. *Journal of Consulting and Clinical Psychology*, 84(3), 191–199.
<https://doi.org/10.1047/ccp0000079>
- Ramanadhan, S., Crisostomo, J., Alexander-Molloy, J., Gandelman, E., Grullon, M., Lora, V., Reeves, C., Savage, C., & Viswanath, K. (2012). Perceptions of evidence-based programs among community-based organizations tackling health disparities: A

- qualitative study. *Health Education Research*, 27(4), 717–728.
<https://doi.org/10.1093/her/cyr088>
- Rapley, H. A., & Loades, M. E. (2018). A systematic review exploring therapist competence, adherence and therapy outcomes in individual CBT for children and young people. *Psychotherapy Research*, 29(8), 1010–1019.
<https://doi.org/10.1080/10503307.2018.1464681>
- Reiland, S., & Lauterbach, D. (2008). Effects of trauma and religiosity on self-esteem. *Psychological Reports*, 102, 779–790.
- Rivera, S., & de Arellano, M. A. (2008, January). *Culturally modified Trauma-Focused Cognitive Behavioral Therapy for Hispanic children: Preliminary findings*. Presented at the 22nd Annual San Diego International Conference on Child and Family Maltreatment. San Diego, CA.
- Robbins, M. S., Feaster, D. J., Horigian, V. E., Puccinelli, M. J., Henderson, C., & Szapocznik, J. (2011). Therapist adherence in Brief Strategic Family Therapy for adolescent drug abusers. *Journal of Consulting and Clinical Psychology*, 79, 43–53.
<https://doi.org/10.1037/a0022146>
- Rodolfa, E., Brent, R., Eisman, E., Nelson, P., Rehm, L., & Ritchie, P. (2005). A cube model for competency development: Implications for psychology educators and regulators. *Professional Psychology: Research and Practice*, 36(4), 347–354.
<https://doi.org/10.1037/0735-7028.36.4.347>
- Rohrbach, L. A., Gunning, M., Sun, P., & Sussman, S. (2010). The project towards no drug abuse (TND) dissemination trial: Implementation fidelity and immediate outcomes. *Prevention Science*, 11(1), 77–88.
- Roosa, M., Scripa, J. S., Zastowny, T. R., & Ford, J. H. (2011). Using a NIATx based local learning collaborative for performance improvement. *Evaluation and Program Planning*, 34(4), 390–398. <https://doi.org/10.1016/j.evalprogplan.2011.02.006>

- Rosenbaum, M., & Ronen, T. (1998). Clinical supervision from the standpoint of cognitive-behavior therapy. *Psychotherapy: Theory, Research, Practice, Training*, 35(2), 220 – 230. <https://doi.org/10.1037/h0087705>
- Rousmaniere, T. G., Swift, J. K., Babins-Wagner, R., Whipple, J. L., & Berzins, S. (2016). Supervisor variance in psychotherapy outcome in routine practice. *Psychotherapy Research*, 26(2), 196 – 205. <https://doi.org/10.1080/10503307.2014.963730>
- Rowe, C., Richter, H., Henderson, C., Gantner, A., Mos, K., Nielsen, P., & Phan, O. (2013). Implementation fidelity of Multidimensional Family Therapy in an international trial. *Journal of Substance Abuse Treatment*, 44(4), 391–399. <https://doi.org/10.1016/j.jasat.2012.08.225>
- Rutkowski, B. A., Gallon, S., Rawson, R. A., Freese, T. E., Bruehl, A., Crèvecoeur-MacPhail, D., Sugita, W., Molfenter, T., & Cotter, F. (2010). Improving client engagement and retention in treatment: The Los Angeles County experience. *Journal of Substance Abuse Treatment*, 39, 78–86.
- Safran, J. D., Muran, C. J., Stevens, C., & Rothman, M. (2008). A relational approach to supervision: Addressing ruptures in the alliance. In C. A. Falender & E. P. Shafranske (Eds.), *Casebook for clinical supervision: A competency-based approach* (pp. 137–157). American Psychological Association. <https://doi.org/10.1037/11792-007>
- Salazar, A. M., Keller, T. E., Gowen, L. K., & Courtney, M. E. (2013). Trauma exposure and PTSD among older adolescents in foster care. *Social Psychiatry and Psychiatric Epidemiology: The International Journal for Research in Social and Genetic Epidemiology and Mental Health Services*, 48(4), 545–551. <https://doi.org/10.1007/s00127-012-0563-0>
- Salloum, A., Brent, B. J., Robst, J., Scheeringa, M. S., Cohen, J. A., & Storch, E. A. (2015, September 24). Stepped and standard care for childhood trauma: A pilot randomized clinical trial. *Research on Social Work Practice*, 27(6), 653–663.

- Salloum, A., Wang, W., Robst, J., Murphy, T. K., Scheeringa, M. S., Cohen, J. A., & Storch, E. A. (2016). Stepped care versus standard Trauma-Focused Cognitive Behavioral Therapy for young children. *Journal of Child Psychology and Psychiatry*, 57(5), 614–622.
- Santa Ana, E. J., Carroll, K. M., Añez, L., Paris, M., Ball, S. A., Nich, C., Frankforter, T., Suarez-Morales, L., Szapocznik, J., & Martino, S. (2009). Evaluating motivational enhancement therapy adherence and competence among Spanish-speaking therapists. *Drug and Alcohol Dependence*, 103(1–2), 44–51. <https://doi.org/10.1016/j.drugalcdep.2009.03.006>
- Saunders, B. E., Berliner, L., & Hanson, R. F. (Eds.). (2004). *Child physical and sexual abuse: Guidelines for treatment* (Revised Report: April 26, 2004). National Crime Victims Research and Treatment Center.
- Saunders, B. E., & Adams, Z. W. (2014). Epidemiology of Traumatic Experiences in Childhood. *Child and Adolescent Psychiatric Clinics of North America*, 23(2), 167–184. <https://doi.org/10.1016/j.chc.2013.12.003>
- Saunders, B. E., & Hanson, R. F. (2014). Innovative methods for implementing evidence-supported interventions for mental health treatment of child and adolescent victims of violence. In R. M. Reece, R. F. Hanson, & J. Sargent (Eds.), *Treatment of child abuse: Common ground for mental health, medical, and legal practitioners* (2nd ed., pp. 235–245) Johns Hopkins University Press.
- Saunders, B. E. (2003). Understanding children exposed to violence: Toward an integration of overlapping fields. *Journal of Interpersonal Violence*, 18, 356–376. <https://doi.org/10.1177/0886260502250840>
- Scaife, J., & Inskipp, F. (2001). *Supervision in the mental health professions: A practitioner's guide*. Brunner-Routledge.
- Scheeringa, M. S., & Zeanah, C. H. (2001). A relational perspective on PTSD in early childhood. *Journal of Traumatic Stress*, 14, 799–815. <http://dx.doi.org/10.1023/A:1013002507972>

- Schoenwald, S. K., Chapman, J. E., Sheidow, A. J., & Carter, R. E. (2009). Long-term youth criminal outcomes in MST transport: The impact of therapist adherence and organizational climate and structure. *Journal of Clinical Child and Adolescent Psychology*, 38, 91–105. <https://doi.org/10.1080/15374410802575388>
- Schoenwald, S. K., & Garland, A. F. (2013). A review of treatment adherence measurement methods. *Psychological Assessment*, 25, 146–156.
- Schoenwald, S. K., Garland, A. F., Southam-Gerow, M. A., Chorpita, B. F., & Chapman, J. E. (2011). Adherence measurement in treatments for disruptive behavior disorders: Pursuing clear vision through varied lenses. *Clinical Psychology: Science and Practice*, 18(4), 331–341. <https://doi.org/10.1111/j.1468-2850.2011.01264.x>
- Schoenwald, S. K., Sheidow, A. J., & Chapman, J. E. (2009). Clinical supervision in treatment transport: Effects on adherence and outcomes. *Journal of Consulting and Clinical Psychology*, 77(3), 410–421. <https://doi.org/10.1037/a0013788>
- Schoenwald, S. K., Sheidow, A. J., Letourneau, E. J., & Liao, J. G. (2003). Transportability of Multisystemic Therapy: Evidence for multilevel influences. *Mental Health Services Research*, 5, 223–239. <https://doi.org/10.1023/A:1026229102151>
- Seo, S. (2006). *A review and comparison of methods for detecting outliers in univariate data sets* [Unpublished master's thesis]. University of Pittsburgh.
- Serlin, R. C., Carr, J., & Marascuillo, L. A. (1982). A measure of association for selected nonparametric procedures. *Psychological Bulletin*, 92, 786–790.
- Sexton, T., & Turner C. W. (2010). The effectiveness of Functional Family Therapy for youth with behavior problems in community practice setting. *Journal of Family Psychology*, 24, 339–348. <https://doi.org/10.1037/a0019406>
- Shechtman, Z., & Leichtentritt, J. (2010). The association of process with outcomes in child group therapy. *Psychotherapy Research*, 20, 8–21. <https://doi.org/10.1080/10503300902926562>

- Sheidow, A. J., Donohue, B. C., Hill, H. H., Henggeler, S. W., & Ford, J. D. (2008). Development of an audiotape review system for supporting adherence to an evidence-based treatment. *Professional Psychology: Research and Practice*, 39(5), 553 – 560.
<https://doi.org/10.1037/0735-7028.39.5.553>
- Shonkoff, J. P., Boyce, T. W., & McEwen, B. S. (2009). Neuroscience, molecular biology, and the childhood roots of health disparities building a new framework for health promotion and disease prevention. *JAMA*, 301(21), 2252–2259.
- Sickel, A. E., Noll, J. G., Moore, P. J., Putnam, F. W., & Trickett, P. K. (2002). The long-term physical health and healthcare utilization of women who were sexually abused as children. *Journal of Health Psychology*, 7(5), 583–598.
<https://doi.org/10.1177/1359105302007005677>
- Sigel, B. A., Kramer, T. L., Conners-Burrow, N. A., Church, J. K., Worley, K. B., & Mitrani, N. A. (2013). Statewide dissemination of trauma-focused cognitive-behavioral therapy (TF-CBT). *Children and Youth Services Review*, 35(6), 1023 – 1029.
<https://doi.org/10.1016/j.childyouth.2013.03.012>
- Sijercic, I., Lane, J. E. M., Gutner, C. A., Monson, C. M., & Stirman, S. W. (2020). The association between clinician and perceived organizational factors with early fidelity to cognitive processing therapy for posttraumatic stress disorder in a randomized controlled implementation trial. *Administration and Policy in Mental Health and Mental Health Services Research*, 47(8), 8–18. <https://doi.org/10.1007/s10488-019-00966-7>
- Singh, A., & Chun, K. Y. S. (2010). ‘From the margins to the center’: Moving towards resilience-based model of supervision for queer people of color supervisors. *Training and Education in Professional Psychology*, 4(1), 36–46. <https://doi.org/10.1037/a0017373>
- Skar, A. S., Ormhaug, S. M., & Jensen, T. K. (2020). Reported levels of upset in youth after routine trauma screening at mental health clinics. *JAMA Network*, 2(5), e194003.

- Smith, J. L., Amrhein, P. C., Brooks, A. C., Carpenter, K. M., Levin, D., Schreiber, E. A., Travaglini, L. A., & Nunes, E. V. (2007). Providing live supervision via teleconferencing improves acquisition of Motivational Interviewing skills after workshop attendance. *The American Journal of Drug and Alcohol Abuse*, 33(1), 163–168.
<https://doi.org/10.1080/00952990601091150>
- Smith, J. L., Carpenter, K. M., Amrhein, P. C., Brooks, A. C., Levin, D., Schreiber, E. A., Travaglini, L. A., Hu, M. C., & Nunes, E. V. (2012). Training substance abuse clinicians in motivational interviewing using live supervision via teleconferencing. *Journal of Consulting and Clinical Psychology*, 80(3), 450 – 464. <https://doi.org/10.1037/a0028176>
- Social Work Guide (2021). *South Carolina social work license requirements*. Social Work Guide.
<https://www.socialworkguide.org/licensure/south-carolina/>
- Southam-Gerow, M. A., Chorpita, B. F., & Gleacher, A. A. (2008). Are children with anxiety disorders privately referred to a university clinic like those referred from the public mental health system? *Administration and Policy in Mental Health and Mental Health Services Research*, 35(3), 168–180. <https://doi.org/10.1007/s10488-007-0154-7>
- Southam-Gerow, M. A., & McLeod, B. D. (2013). Advances in applying integrity research for dissemination and implementation science: Introduction to special issue. *Clinical Psychology: Science and Practice*, 20, 1–13.
- Southam-Gerow, M. A., & Prinstein, M. J. (2014). Evidence base updates: The evolution of the evaluation of psychological treatments for children and adolescents. *Journal of Child & Adolescent Psychology*, 43(1), 1–6. <http://dx.doi.org/10.1080/15374416.2013.855128>
- Spektor, D. (2008). *Therapists' adherence to manualized treatments in the context of ruptures* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3333897)

- Spence, S. H., Wilson, J., Kavanagh, D., Strong, J., & Worrall, L. (2001). Clinical supervision in four mental health professions: A review of the evidence. *Behavior Change*, 18, 135–155.
- Spruill, J., Rozensky, R. H., Stigall, T. T., Vasquez, M., Bingham, R. P., & De Vaney Olvey, C. (2004). Becoming a competent clinician: Basic competencies in intervention. *Journal of Clinical Psychology*, 60(7), 741–754. <https://doi.org/10.1002/jclp.20011>
- Stanton, B., Guo, J., Cottrell, L., Galbraith, J., Li, X., Gibson, C., Pack, R., Cole, M., Marshall, S., & Harris, C. (2005). The complex business of adapting effective interventions to new populations: An urban to rural transfer. *Journal of Adolescent Health*, 37(2), 163. <https://doi.org/10.1016/j.jadohealth.2004.10.005>
- Stauffer, L. B., & Deblinger, E. (1996). Cognitive behavioral groups for nonoffending mothers and their young sexually abused children: A preliminary treatment outcome study. *Child Maltreatment*, 1(1), 65–76. <https://doi.org/10.1177/1077559596001001007>
- Steinberg, A. M., Brymer, M. J., Decker, K. B., & Pynoos, R. S. (2004). The University of California at Los Angeles Post-Traumatic Stress Disorder Reaction Index. *Current Psychiatry Reports*, 6(2), 96–100.
- Stephan, S., Mulloy, M., & Brey, L. (2011). Improving collaborative mental health care by school-based primary care and mental health providers. *School Mental Health*, 3, 70–80.
- Stewart, R. E., Adams, D. R., Mandell, D. S., Nangia, G., Shaffer, L., Evans, A. C., Rubin, R., Weaver, S., Hadley, T. R., & Beidas, R. S. (2017). Non-participants in policy efforts to promote evidence-based practices in a large behavioral health system. *Implementation Science*, 12(1), 70.
- Stewart, R. E., Chambless, D. L., & Baron, J. (2012). Theoretical and practical barriers to practitioners' willingness to seek training in empirically supported treatments. *Journal of Clinical Psychology*, 68(1), 8–23.

- Stirman, S. W., Matza, A., Gamarra, J., Toder, K., Xhezo, R., Evans, R. C., Hurford, M., Beck, A. T., Crits-Christoph, P., & Creed, T. (2015). System-level influences on the sustainability of a cognitive therapy program in a community behavioral health network. *Psychiatric Services*, 66(7), 734 – 742. <https://doi.org/10.1176/appi.ps.201400147>
- Strating, M. M. H., Broer, T., Van Rooijen, S., Bal, R. A., & Nieboer, A. P. (2012). Quality improvement in long-term mental health: Results from four collaboratives. *Journal of Psychiatric and Mental Health Nursing*, 19, 379–388.
- Strating, M. M. H., & Nieboer, A. P. (2010). Norms for creativity and implementation in healthcare teams: Testing the group innovation inventory. *International Journal for Quality in Health Care*, 22, 275–282.
- Stratton, K. J. (2011). *Intervention and impact: An examination of treatment adherence, therapeutic alliance, and outcome in cognitive therapy*. [Unpublished doctoral dissertation]. The New School University.
- Strauss, K., Vicari, S., Valeri, G., D’Elia, L., Arima, S., & Fava, L. (2012). Parent inclusion in early intensive behavioral intervention: The influence of parental stress, parent treatment fidelity and parent-mediated generalization of behavior targets on child outcomes. *Research in Developmental Disabilities: A Multidisciplinary Journal*, 33(2), 688–703. <https://doi.org/10.1016/j.ridd.2011.11.008>
- Strunk, D. R., Brotman, M. A., & DeRubeis, R. J. (2010). The process of change in cognitive therapy for depression: Predictors of early inter-session symptom gains. *Behaviour Research and Therapy*, 48(7), 599–606. <https://doi.org/10.1016/j.brat.2010.03.011>
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2009). *Clinical supervision and professional development of the substance abuse counselor*. <https://store.samhsa.gov/sites/default/files/d7/priv/sma14-4435.pdf>

- Supervision Competency Workforce Initiative. (2009). *Enhancing supervisory skills in Connecticut's behavioral health workforce*. Retrieved from https://www.cwbh.org/projects/supervisor_competency.
- Swain, K., Whitley, R., McHugo, G. J., & Drake, R. E. (2010). The sustainability of evidence-based practices in routine mental health agencies. *Community Mental Health Journal*, 46(2), 119–129. <https://doi.org/10.1007/s10597-009-9202-y>
- Talbot, M. (2004). Monkey see, monkey do: A critique of the competency model in graduate medical education. *Medical Education*, 38, 587–592. <https://doi.org/10.1046/j.1365-2923.2004.01794.x>
- Tanner, M. A., Gray, J. J., & Haaga, D. A. F. (2012). Association of cotherapy supervision with client outcomes, attrition, and trainee effectiveness in a psychotherapy training clinic. *Journal of Clinical Psychology*, 68(12), 1241 – 1252. <https://doi.org/10.1002/jclp.21902>
- The National Child Traumatic Stress Network. (n.d.). *Interventions*. <https://www.nctsn.org/treatments-and-practices/trauma-treatments/interventions>
- Thijssen, J., Albrecht, G., Muris, P., & de Ruiter, C. (2017). Treatment fidelity during therapist initial training related to subsequent effectiveness of Parent Management Training – Oregon model. *Journal of Child and Family Studies*, 26(7), 1991–1999. <https://doi.org/10.1007/s10826-017-0706-8>
- Thurber, S. L. (2005). *The effects of direct supervision on therapist behavior: An initial functional analysis* [Doctoral dissertation, Brigham Young University]. Dissertation Abstracts International: Section B: The Sciences and Engineering.
- Tukey, J. W. (1977). *Exploratory data analysis*. Addison-Wesely.
- Turner, L. B., Fischer, A. J., & Luiselli, J. K. (2016). Towards a competency-based, ethical, and socially valid approach to the supervision of applied behavior analytic trainees. *Behavior Analysis in Practice*, 9(4), 287 – 298. <https://doi.org/10.1007/s40617-016-0121-4>

- Tutus, D., & Goldbeck, L. (2016). Posttraumatic symptoms and cognitions in parent of children and adolescents with PTSD. *European Child & Adolescent Psychiatry*, 25, 997–1005.
<http://dx.doi.org/10.1007/s00787-016-0821-x>
- Twala, B. (2009). An empirical comparison of techniques for handling incomplete data using decision trees. *Applied Artificial Intelligence*, 23, 373–405.
- Unterhitzberger, J., Wintersohl, S., Lang, M., König, J., & Rosner, R. (2019). Providing manualized individual trauma-focused CBT to unaccompanied refugee minors with uncertain residence status: A pilot study. *Child and Adolescent Psychiatry and Mental Health*, 13(1), 1–10.
- Vannoy, S. D., Mauer, B., Kern, J., Girn, K., Ingoglia, C., Campbell, J., Galbreath, L., & Unützer, J. (2011). A learning collaborative of CMHCs and CHCs to support integration of behavioral health and general medical care. *Psychiatric Services*, 62, 753–758.
http://dx.doi.org/10.1176/ps.62.7.pss6207_0753
- Versteeg, M. H., Laurant, M. G., Franx, G. C., Jacobs, A. J., & Wensing, M. J. P. (2012). Factors associated with the impact of quality improvement collaboratives in mental healthcare: An exploratory study. *Implementation Science*, 7, 1–11.
- Waltz, J., Addis, M. E., Koerner, K., & Jacobson, N. S. (1993). Testing the integrity of a psychotherapy protocol: Assessment of adherence and competence. *Journal of Consulting and Clinical Psychology*, 61(4), 620–630. <https://doi.org/10.1037/0022-006X.61.4.620>
- Walker, D. F., Reese, J. B., Hughes, J. P., & Troskie, M. J. (2010). Addressing religious and spiritual issues in Trauma-Focused Cognitive Behavior Therapy for children and adolescents. *Professional Psychology: Research and Practice*, 41(2), 174–180.
<https://doi.org/10.1037/a0017782>

- Wampold, B. E., & Holloway, E. L. (1997). Methodology, design, and evaluation in psychotherapy supervision research. In W. C. Edward (Ed.), *Handbook of psychotherapy supervision* (pp. 11 – 27). John Wiley & Sons Inc.
- Wang, D. C., Aten, J. D., Jean-Charles, W., Griff, K. P., Davis, E. B., Hook, J. N., Davis, D. E., Van Tongeren, D. R., Abouezzeddine, T., Sklar, Q., & Wang, A. (2016) Culturally adapted spiritually oriented Trauma-Focused Cognitive Behavioral Therapy for child survivors of restavek. *Spirituality in Clinical Practice*, 3(4), 224–236.
<https://doi.org/10.1037/scp0000101>
- Watkins, C. E., Jr. (2014). Clinical supervision in the 21st century: Revisiting pressing needs and impressing possibilities. *American Journal of Psychotherapy*, 68(2), 251–272.
- Webb, C. A., Auerbach, R. P., & DeRubeis, R. J. (2012). Processes of change in CBT of adolescent depression review and recommendations. *Journal of Clinical Child and Adolescent Psychology*, 41(5), 654–665.
- Webb, C. A., DeRubeis, R. J., & Barber, J. P. (2010). Therapist adherence/competence and treatment outcome: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 78(2), 200–211. <http://doi.org/10.1037/a0018912>
- Webb, C., Hayes, A. M., Grasso, D., Laurenceau, J., & Deblinger, E. (2014). Trauma-Focused Cognitive Behavioral Therapy for youth: Effectiveness in a community setting. *Psychological Trauma: Theory, Research, Practice, and Policy*, 6, 555–562.
- Weck, F., Jakob, M., Neng, J. M. B., Höfling, V., Grikscheit, F., & Bohus, M. (2015). The effects of bug-in-the-eye supervision on therapeutic alliance and therapist competence in cognitive-behavioural therapy: A randomized controlled trial. *Clinical Psychology & Psychotherapy*, 23(5), 386–396. <https://doi.org/10.1002/cpp.1968>
- Weisz, J. R., & Kazdin, A. E. (2017). *Evidence-based psychotherapies for children and adolescents* (3rd ed.). The Guilford Press.

- Weisz, J. R., Ugueto, A. M., Cheron, D. M., & Herren, J. (2013). Evidence-based youth psychotherapy in the mental health ecosystem. *Journal of Clinical Child and Adolescent Psychology, 42*, 274–286.
- West, J. D., Bubbenzer, D. L., Pinsoneault, T., & Holeman, V. (1993). Three supervision modalities for training marital and family counselors. *Counselor Education and Supervision, 33*(2), 127 – 138. <https://doi.org/10.1002/j.1556-6978.1993.tb00275.x>
- Wethington, H. R., Hahn, R. A., Fuqua-Whitley, D. S., Sipe, T. A., Crosby, A. E., Johnson, R. L., Liberman, A. M., Moscicki, E., Price, L. N., Tuma, F. K., Kalra, G., & Chattopadhyay, S. K. (2008). The effectiveness of interventions to reduce psychological harm from traumatic events among children and adolescents: A systematic review. *American Journal of Preventive Medicine, 35*(3), 287–313.
<https://doi.org/10.1016/j.amepre.2008.06.024>
- Wheeler, S., & Richards, K. (2007). The impact of clinical supervision on counsellors and therapists, their practice and their clients. A systematic review of the literature. *Counselling & Psychotherapy Research, 7*(1), 54 – 65.
<https://doi.org/10.1080/14733140601185274>
- Widom, C. S., Czaja, S. J., Bentley, T., & Johnson, M. S. (2012). A prospective investigation of physical health outcomes in abused and neglected children: New findings from a 30-year follow-up. *American Journal of Public Health, 102*, 1135–1144.
<https://doi.org/10.2105/AJPH.2011.300636>
- Windom, C. S., & Maxfield, M. G. (2001). *An update on the “cycle of violence.”* National Institute of Justice Research in Brief, Department of Justice, Office of Justice Programs.
<https://www.ncjrs.gov/pdffiles1/nij/184894.pdf>
- Woo, S. M., Hepner, K. A., Gilbert, E. A., Osilla, K., Hunter, S. B., Muñoz, R. F., Watkins, K. E. (2013). Training addiction counselors to implement an evidence-based intervention:

- Strategies for increasing organizational and provider acceptance. *Cognitive and Behavioral Practice*, 20(2), 232–244.
- Woods-Jaeger, B. A., Kava, C. M., Akiba, C. F., Lucid, L., & Dorsey, S. The art and skill of delivering culturally responsive Trauma-Focused Cognitive Behavioral Therapy in Tanzania and Kenya. *Psychological Trauma: Theory, Research, Practice, and Policy*, 9(2), 230–238. <https://doi.org/10.1037/tra0000170>
- Woody, S. R., & Ollendick, T. H. (2006). Techniques factors in treating anxiety disorders. In L. G. Castonguay & L. E. Beutler (Eds.), *Principles of therapeutic change that work* (pp. 167–186). Oxford University Press.
- Woolf, S. H. (2008) The meaning of translational research and why it matters. *JAMA*, 299(2), 211–213.
- Zarafontis-Muller, S., Kuhr, K., & Bechdorf, A. (2014). The relationship between therapist's competence and adherence to outcome in cognitive-behavioural therapy-results of a metanalysis. *Fortschritte der Neurologie-Psychiatrie*, 82(9), 502–510.
- Zazzali, J. L., Sherbourne, C., Hoagwood, K. E., Greene, D., Bigley, M. F., & Sexton, T. L. (2008). The adoption and implementation of an evidence-based practice in child and family mental health services organizations: A pilot study of Functional Family Therapy in New York state. *Administration and Policy in Mental Health and Mental Health Services Research*, 35, 38–49. <https://doi.org/10.1007/s10488-007-0145-8>
- Zorzella, K. P., Muller, R. T., & Cribbie, R. A. (2015). The relationships between therapeutic alliance and internalizing and externalizing symptoms in Trauma-Focused Cognitive Behavioral Therapy. *Child Abuse and Neglect*, 50, 171–181. <https://doi.org/10.1016/j.chiabu.2015.08.002>

Appendix A

Tables and Figures

Table 1

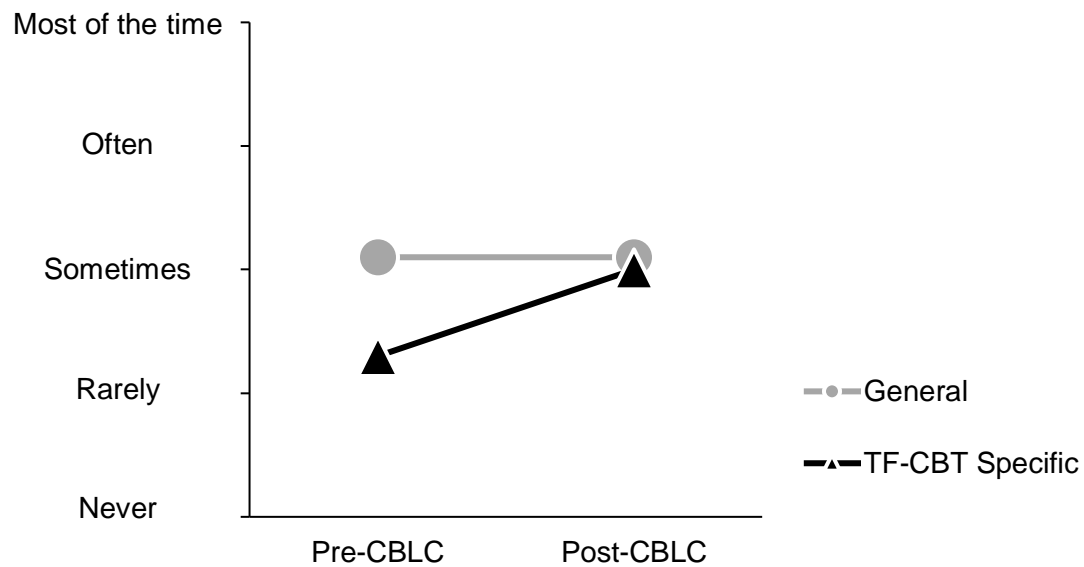
Pre- to Post-Community-Based Learning Collaborative (CBLC) Changes in Therapist-Reported Supervision Quantity and Quality

Supervision Quantity						
<i>Variable</i>	<i>Pre-CBLC</i>	<i>Post-CBLC</i>				
	<i>M (SD)</i>	<i>M (SD)</i>	<i>Z</i>		<i>p</i>	<i>r</i>
Frequency ^a						
Planned	2.8 (0.9)	2.9 (0.9)	0.36		.72	.04
Unplanned	3.2 (0.9)	2.9 (1.1)	-2.27		.02	-.24
	<i>M (SD)</i>	<i>M (SD)</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Duration (min) ^a	63.4 (30.1)	53.9 (16.0)	2.83	86	.006	0.38
Supervision Content						
<i>TSC-T^b</i>	<i>M(SD)</i>	<i>M(SD)</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
General	3.1 (0.9)	3.1 (0.8)	-0.13	85	.45	-0.01
TF-CBT-Specific	2.3 (1.2)	3.0 (0.9)	1.20	85	<.001	0.56
Therapist Adherence						
<i>TPS^b</i>	<i>M(SD)</i>	<i>M(SD)</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
General	3.6 (1.1)	3.8 (0.9)	4.87	85	.08	0.15
TF-CBT-Specific	3.1 (1.0)	3.6 (0.9)	1.42	85	<.001	0.53

Note. TF-CBT = Trauma-Focused Cognitive Behavior Therapy. TSC-T = TF-CBT Supervision Checklist–Therapist Report. TPS = TF-CBT Practices Scale. ^a *n* = 87, ^b *n* = 86.

Figure 1

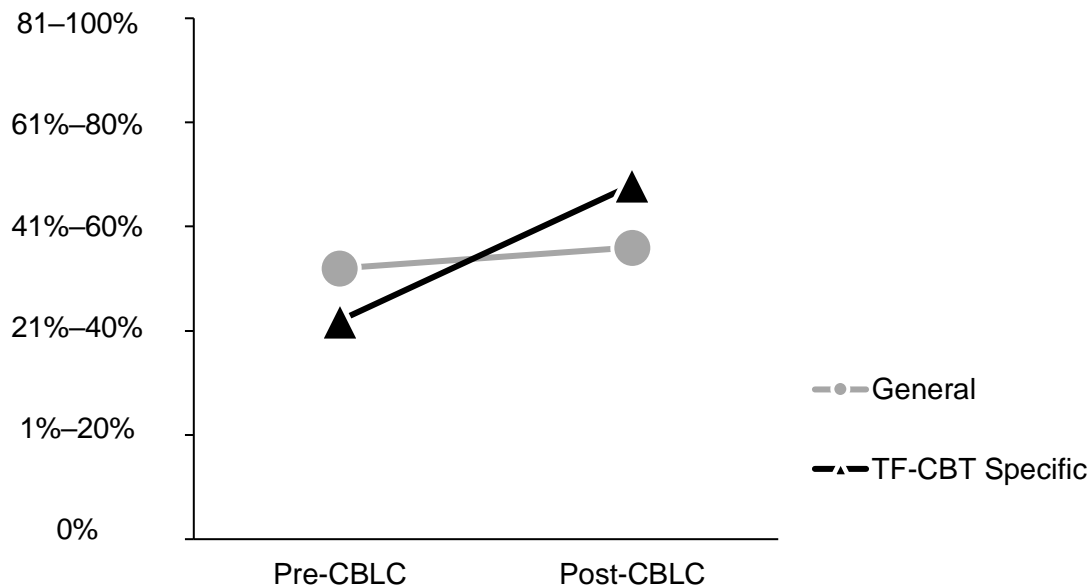
Changes in Therapist-Reported General and TF-CBT-Specific Supervision, Pre- to Post-Community-Based Learning Collaborative (CBLC)



Note. This figure illustrates pre- to post-CBLC changes in therapist-reported general and TF-CBT-specific supervision content (as measured by standardized subscale scores of the TF-CBT Supervision Checklist–Therapist Report [TSC-T]).

Figure 2

Changes in Therapist-Reported General and TF-CBT-Specific Adherence with Child Trauma Cases, Pre- to Post-Community-Based Learning Collaborative (CBLC)



Note. This figure illustrates pre- to post-CBLC changes in therapist-reported percentage of their child trauma cases with which they used general and TF-CBT-specific practice elements (as measured by standardized subscale scores of the TF-CBT Practices Scale [TPS]).

Appendix B

TF-CBT Supervision Checklist Therapist Report (TSC-T)

Rate how frequently the following things occurred during supervision provided by your agency:

1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Most of the time

1. An agenda for each supervision session was established.
2. Supervisor reviewed your specific treatment goals for parent sessions.
3. Supervisor reviewed your specific treatment goals for child sessions.
4. Supervisor reviewed your specific treatment goals for joint parent-child sessions.
5. Supervisor reviewed the client homework you assigned.
6. Supervisor followed up on recommendations made during the previous supervision session.
7. Supervisor did co-therapy with you as part of supervision.
8. Supervisor provided specific positive feedback when you described using TF-CBT strategies appropriately.
9. Supervisor helped you with how to help your clients complete their trauma narratives.
10. Supervisor encouraged the regular use of standardized measures of symptoms and problems to assess client progress in therapy.
11. Supervisor asked you to role-play or practice a TF-CBT technique in supervision.
12. Supervisor explained and described TF-CBT techniques in sufficient detail for you to do them in therapy.
13. Supervision sessions were collaborative and encouraged your critical thinking about your cases.
14. Supervisor was encouraging when you considered creative ways to implement a TF-CBT component or technique.
15. Supervisor provided guidance on scoring and interpreting standardized measures of symptoms and problems.
16. Supervisor was well-organized, well-prepared, and engaged in the supervision sessions.
17. Supervisor regularly reviewed your progress through the TF-CBT PRACTICE components with each of your cases.
18. Supervisor listened to audiotapes or viewed videotapes of some of your therapy sessions.
19. Techniques were discussed to encourage greater family engagement and participation in therapy.

20. Supervisor helped you manage “crisis of the week” (COW) situations and stay on track working through the TF-CBT PRACTICE components.
21. Supervisor helped you find solutions to logistical and administrative barriers that impeded treatment participation, engagement, and progress.
22. Supervisor provided specific constructive feedback when you had difficulty doing TF-CBT techniques.
23. Supervisor helped you prioritize your interventions when clients had many problems.
24. Supervisor encouraged you to complete the TF-CBT treatment protocol in about 16 sessions or less.
25. Supervisor divided time effectively between reviewing cases that were responding well and those that were more difficult or complex.
26. Supervisor encouraged the application of TF-CBT interventions to both the abuse-related and non-abuse-related symptoms and problems your clients experienced.
27. Supervisor demonstrated knowledge and skill in teaching and supervising TF-CBT.
28. Client outcomes were discussed in observable and measurable terms.
29. Supervision was very useful.

Note. The *general* subscale includes items 1, 2, 3, 4, 5, 6, 13, 15, 16, 19, 21, 23, 25, 28, and 29. The *protocol-specific* subscale includes items 8, 9, 12, 14, 17, 20, 22, 24, 26, and 27. Items assessing gold-standard techniques that were excluded were items 7, 10, 11, and 18.

Appendix C

Therapist Practices Scale (TPS)

Throughout this questionnaire, please think about the clinical cases that you have seen as a therapist over the past 3 months in which the primary focus of treatment was helping a child or adolescent with symptoms or problems related to having experienced traumatic events such as abuse or violence. The following questions are about what you did in therapy with those child trauma cases.

In what percentage of the child trauma cases you saw in the past 3 months did you use each of the following procedures?

0	1	2	3	4
None	1%–20%	21%–40%	61%–80%	81%–100%

1. Established an agenda and structure for each therapy session.
2. Provided specific information about the types of traumatic event(s) the child has experienced.
3. Taught the child to identify people, places, or situations that could be dangerous.
4. Helped the child and parent to expand their vocabularies to describe emotions.
5. Helped the child and parent understand the connection between thoughts, feelings, and behaviors.
6. In more than one session, directly discussed with the child specific details of what happened during the child's traumatic event(s).
7. Explained the rationale and benefits of the intervention and described the treatment approach.
8. Talked about ways the child can keep safe in the future.
9. Helped the child identify and correct maladaptive thoughts.
10. Discouraged caregivers from talking with their child about the traumatic event(s) he/she experienced.
11. Regularly assigned homework or activities to complete for the next session.
12. In more than one session, encouraged the child to describe thoughts, feelings, or sensations experienced during the traumatic event(s) or related experiences.
13. Taught parenting strategies to enhance the parent/child relationship, such as active listening, free play, differential attention, and effective instructions.
14. Allowed the child or their supportive parent to lead or direct most of the sessions.
15. Helped the child and parent understand that negative feelings after traumatic event(s) happen with a lot of people.

16. Provided education about OK touches, not OK touches, and confusing touches.
17. Used imaginary or in-vivo exposure to help the child cope with traumatic reminders.
18. Conducted a joint session with the parent and child to talk about the traumatic event(s).
19. For many of the sessions, dealt with crises or events that happened to the child in the past week or two.
20. Taught the child about positive things they could say to themselves to feel better.
21. Taught the child to tell a trusted adult if someone hurts them or if they see someone else being hurt.
22. Taught the child to tighten and relax their muscles to feel less tense.
23. Taught the child to think of or imagine something positive, like a pleasant place, person, or situation.
24. Discussed the use of effective discipline strategies, such as proper use of time out, work chores, privilege losses, and active ignoring.
25. Taught the child to breathe deeply and exhale slowly to feel calmer.
26. Taught anger management skills.
27. Discouraged caregivers from disciplining their child when he/she becomes upset or misbehaves.
28. Helped the child do an activity, such as writing a book, drawing a set of pictures, or writing poems or songs that describe the traumatic event(s) and the child's reactions.
29. Observed the child's play activity to understand what was bothering them.
30. In more than one session, practiced using coping skills to deal with trauma reminders or trauma related distress.
31. Played a fun activity (e.g., board game, videogame) without any discussion of the traumatic event(s).
32. Discussed with parents how to use a behavioral reward system.
33. Had the parent and child discuss the traumatic event(s).
34. Used games, books, art, or play materials to facilitate discussion of the traumatic event(s) with the child.
35. Allowed the child to choose whether or not they talked about the traumatic event(s).
36. Encouraged the child to stop thinking about things that made them upset by thinking of other things.
37. Saw only the child in most sessions.
38. Taught parents to use praise effectively.
39. Often stopped talking about the traumatic event(s) because the child became distressed.

40. Encouraged child to engage in a cathartic exercise to vent their negative feelings about the trauma or the offender (e.g., tearing up paper, destroying an object).

Note. The *general* subscale includes items 1, 7, 11, 14, 19, 31, and 37. The *protocol-specific* subscale includes items 2, 3, 4, 5, 6, 8, 9, 10, 12, 13, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36, 38, 39, and 40. Items 10, 14, 19, 27, 29, 35, 37, 39, and 40 were reverse coded.